Re-called.

Some luggage, one or two small portmanteaus, and a box of chronometers were put into the boat of the *Eagle Speed* and taken charge of by me before I got into her; some 4 or 5 packages in all. I believe the Steward put it in. I enquired whose it was, and was told by some one it was the Captain's papers.

I don't know why luggage was saved before lives; so far as I was concerned, I expected at that time to save all hands with the boats; there was no apparent reason why we should not with care.

We might have saved a great many more than we did had the steamer stopped.

Instead of lowering the boats at once we might have attempted to run up under topsails and foresails after slipping the cable, but this was not thought of to my knowledge. I saw no signs of intoxication in Dr. Donaldson, and never saw him take a drop of spirits while I was on board.

I wish to add that the Captain of the *Eagle Speed* was sober the whole time that he came under my observation.

12*th September* 1865.

Deposition of THOMAS HOSKINS, *re-called and re-sworn.*

The nearest distance that the *Lady Elgin* towed me in the boat was two ships' lengths of the *Eagle Speed*. I mean that she kept that distance off abreast. She might have towed me very close. She was sometimes very much further off in consequence of the drift whilst picking up the boats and the coolies floating about. She might have gone within 20 yards when towing the boats to the ship. After I had missed the ship the first time I was annoyed, and I hailed him and asked him why he did not tow me closer, but I was hoarse and I might not have been heard. I never saw the steamer at any time within a few feet of the ship, much less a few inches. There is a second class buoy abreast of the spot where the *Eagle Speed* was abandoned; the buoy is about 3½ miles from the wreck. Tho buoy is there now, and ought to have been visible that distance from the *Eagle Speed* and the *Lady Elgin* too, but it was a hazy day; it continued so all day. The buoy might have been seen, I think, if it had been looked for, but we didn't know our position, and didn't know where to look for it. If we had looked abeam to the westward of us, we might have picked up the buoy. The Ring Buoy is a smaller buoy,—a third class one. The reason it was seen at a distance of four miles, as stated, may have been that there was a better look-out kept for it, and we knew the position to look for it. I think a second class buoy can be seen in smooth water a little more than four miles, but in a seaway not more than three. I saw the Lower Centre Bulcherry Buoy as we were going towards the light ship; it was about three miles off. I consider the channels of the Mutlah to be sufficiently buoyed for the purposes of safe navigation, but it would be better if the outer buoys were first class instead of second, and the third class re-placed by second.

All the buoys are in efficient condition as far as I am aware of. None have been reported by the Pilots as out of position. I found all the Eastern Channel Buoys in position when I went down in the *Eagle Speed*. Had there been an inner light at the Ring Buoy the steamer might have remained safely by the wreck all night. The blue light would have been seen, and if necessary to run in a course might have been shaped by the bearing to clear the Spit Buoy, and long before we should have got to the Spit Buoy the light itself would have been visible. The same remark applies to the *Eagle Speed*, if at midnight when it was found the leak could not be kept under, it had been desired to run up, she could have slipped and run up safely. The reason why there was so much anxiety to send a boat for the Captain was, that Captain Heath from first to last gave every one to understand that he was not going to stop out; that the steamer could not stop out. I can't say whether he directed the boat to go. I don't know if any board was stuck up with any thing written upon it. My impression was that Captain Heath said that he would not wait longer than to leave sufficient daylight for him to get back to Halliday Island. I can't say that I heard the Captain of the *Eagle Speed* hail the steamer to anchor. I did not hear Captain Heath say he could not anchor. I saw already stated that there would have been no difficulty in anchoring whatever. I think a more powerful steamer than the *Lady Elgin* might have been able to have towed the *Eagle Speed* with one hawser when the other parted. I think she might have been kept in the channel with a powerful channel, and have steered even without a traveller. Ships are frequently towed with one hawser. A powerful vessel would have kept steerage way. The bursting of the feed pipe disabled the *Lady Elgin*; she was not disabled previously, but this is a separate question from the point of her competency to tow the *Eagle Speed* under the circumstances when the hawser parted. I saw the Captain and Chief Officer with cork jackets on; some other Europeans were picked up, some with buoys and some jackets. I can only point out one who was the boy; he had a life belt on and was nearly gone. I wish to make a remark on the boats of the *Eagle Speed*. All the boats that I saw in the water, that's five, including the one launched subsequently by the topasses, were in good order. I took notice of them; I did not pay attention to the sixth boat that was

not launched. I saw the long boat after she was in the water. Had she not been stove, she was most decidedly a serviceable boat to save life. At the consultation Captain Heath gave every one to understand that the steamer was not in a fit state to remain ont on accounnt of the feed pipe being out of repair. I don't know C. Wilson by name, but if he is the man who was left on board the *Lady Elgin* sick on our return, he was with me in the boat all the morning up to half past 10, and worked well. He and Maynard were the only two men in my boat that could pull, the others could not pull in a sea-way.

Deposition of WILLIAM DONALDSON, *Surgeon on board the "Eagle Speed," in charge of Emigrants.*

I WAS on board when the ship left Halliday Island. I was on duty partly, but not very well. There were some of the crew sick when we left Port Canning; I wasn't aware of it at the time; there were some of them sick when we left Halliday Island; I can't say how many; Dr. Sullivan, who was assisting me in my duty, will know. I was not aware that the Captain was unwell at the time. The Chief Officer appeared to be unwell, and did little or no duty the two days, either Sunday and Monday, he was aboard.

The Second Officer was perfectly well and sober so far as I know; I saw him.

The Boatswain had his fingers jammed and was in a great measure off duty. I can't say when his fingers were hurt.

After the ship struck, and the next morning appeared to be sinking, the Captain was sober and apparently well; the coolies were told off in gangs to the pumps all night. I believe the Captain gave orders. When it was found necessary to lower the boats to save the crew and coolies, I don't think the crew and officers were mustered and told off to this duty. I was on deck mostly all the time; I don't remember seeing the Chief Officer on deck at this time; he did not take command of a boat, or I think exert himself to save the coolies. The Second Officer had charge of a boat; he was sober and apparently well at the time; the Boatswain didn't take command of a boat; he was sober; I did not see him exert himself as an officer or more than an ordinary seamen.

There were three boats lowered; I heard the Captain give the order to lower them; a rope ladder was rigged over the stern, and all these boats I think filled in that way, the women and children first, under the superintendence of the Captain there were enough Europeans left on board, I think, to man another boat.

I don't know why another boat was not launched. About 9 A. M. the gig was got over the stern and launched. The Chief Officer and those of the European crew left went in her; they did not take any coolies; I am positive they just saved themselves.

The Captain was there on deck at the time; I can't say why he allowed this, nor can I account for his conduct.

Captain Hoskins' boat came back I know, and I think the Second Mate's boat; but really there were not a great many people saved by the boats.

The crew all this time were, I think, sober, as also the officers, and they obeyed the Captain's orders.

When the Chief Officer and the Europeans went off in the gig, the Captain did not interfere.

The Captain gave orders to pitch the hencoops and all loose lumber overboard, and the coolies, seeing a chance to cling to something and get to the steamer, jumped down the ladder and chains and got on to them, and most of them were picked up. No effort was made by the Captain to launch the other boats with the help of the coolies; there were none of the European crew left, except a sick sailor.

The Captain could speak the language a little; I think there was an Interpreter on board, a Native, and European Compounder who speak the language thoroughly. The Interpreter, after the three boats left first, tried to swim to the steamer, and got drowned; and subsequently the Compounder swam to her; I did not see him go away. I could not speak the language. The Captain did not leave the ship until all the Europeans, except myself and the sick sailor, had left; the Chief Officer came back for him and took him off in the gig. (I think it was the gig, I am not quite sure.) The Captain promised to take me, but he went over the stern while I was going to the gangway to get into her easier, and left me behind; as long as the Captain was aboard the coolies were under control, and a boat could be laid alongside.

Captain Hoskins, about an hour and half after the Captain had left, brought the steamer's boat and took me off, after failing once, owing to the coolies crowding down the ladder over me. When I got on board the steamer, I saw the Captain and the Officers of the *Eagle Speed*. The Captain was well to the best of my belief; he was asleep on the after-locker of the cabin; he did not complain of illness to me; I went down to change my clothes; I did not speak to him; I saw him afterwards on the deck several times during the day, apparently well; he was at dinner at the table and ate his dinner.

The steamer left the wreck about an hour after I came on board of her. I can't state positively that I saw the Captain of the *Eagle Speed* up and about; before the steamer left, I think he was.

The Chief Officer was sitting on the poop when I came on board the steamer; he did not appear to me to be suffering much, but he had complained to me during the two days of debility and exhaustion from previous illness, and I believe he was ill, but I dont think he was too ill to take command on such an emergency.

I am not aware that he was carried on shore at Canning; he may have been worse than I thought. I don't remember seeing him at table coming up the river.

I saw the Second Officer when I came aboard; he also appeared to be well and sober. I can't say why he didn't stick by the ship,

I saw some of the crew; I can't say how many; I think they were well. I can't say how many of the crew of the *Eagle Speed* were sick on the day of the wreck. Dr. O'Sullivan prescribed for those who required medical treatment. I saw four or five men on Sunday at the cuddy door, who appeared to be unhealthy and sick.

Dr. O'Sullivan was sober the whole time, and most useful during the night, after the ship struck, encouraging the coolies; he could speak the language: none of the officers could speak the language; I think the Captain could a little.

I don't recollect seeing the Boatswain standing aft on the poop of the *Eagle Speed* with the Captain when we were there; I didn't see how he got on board the steamer.

I saw his injured hand; I think it was seriously hurt; that would not prevent his directing means to be taken to launch boats, and efforts to be made to save life.

Deposition of Dr. Michael O'Sullivan, *inhabitant of Calcutta, who on solemn affirmation sayeth:—*

I am Civil Surgeon of Canning Town. I went down in the *Eagle Speed*. I was sent for, as I understood, by the Port Master of Canning; a boat was sent for me between 6 and 7 A. M. on Sunday, the 20th ultimo, to the *Walter Morrice*, on board of which I was residing, requesting me to go on board. I found the Doctor (Donaldson) who was in charge of the emigrants very ill with pleurisy, and I was obliged to apply a number of leeches to his side, and in consequence I took charge of the ship down the river.

On leaving Halliday's Island the Captain was well; the Chief Officer was well. I noticed nothing the matter with him. He did not ask me to prescribe for him, and to the best of my knowledge I gave him no medicine; I gave him an emetic about 2 days previously. I did not give him an emetic on that day. The Second Officer was well enough to do his duty. The Boatswain had received a little injury to his index finger, I think of the left hand, but he was not disabled.

When we left Halliday's Island the men were all well, with the exception of one or two who required trifling medical treatment. I considered the whole crew sound, although most of the crew were recovering from the effects of having had too much liquor.

I should not say the Captain was included in the above as recovering from, or having been, under the influence of liquor. I did not observe the Chief Officer on leaving Halliday's Island; neither illness nor anything else brought him to my notice. I could not tell whether he was suffering at the time from the effects of debility brought on by previous sickness. I did not observe anything wrong about the Second Mate on leaving Halliday's Island, he had been indulging before leaving port. When I dressed the Boatwain's finger at Halliday's Island he shewed no signs of having been under the influence of liquor. There was not a man incapacitated for work or who would not have got well at sea in a few days. If Captain Hoskins has stated that I told the Chief Mate I had given him an emetic it is a mistake. If it is the case, I can only account for it by my having become confused. It is possible, but extremely improbable. I saw the Captain of the *Eagle Speed* on board the *Lady Elgin* after he left the wreck. I did not notice him when he got on board. I was too much interested in what was passing. I did not attend him professionally.

I did not observe his physical condition until the evening. He seemed then like a man who was perfectly placid and contented; he was perfectly sober; it did not appear to me as if anything at all had occurred to disturb his serenity. I sat at dinner with him, and some time after. I am not aware whether the Chief Mate was carried on shore sick at Canning Town; I did not look upon him as a sick man. I did not hear the crew or Boatswain of the *Eagle Speed* refuse to go back to the ship, or to man a boat. I did not hear the Second Mate refuse. I did not hear them asked to go. With regard to the consultation above the *Lady Elgin* leaving the wreck, neither Dr. Donaldson nor myself nor any one most concerned in the matter were consulted, while a number of passengers who knew nothing about it were consulted.

Deposition of James Brinsden, *late Commander, "Eagle Speed," inhabitant of Calcutta, who on solemn affirmation sayeth:—*

I was the Commander of the late Ship *Eagle Speed*. My crew were twenty-eight in number, exclusive of Doctor, Compounder, four Topasses, and four Cooks. I hand in a list with the ratings taken from the Articles. My ship had come here from Auckland, New Zealand. I took private passengers. My ship was inspected by the Emigration

Commissioners. The number of my crew then was thirty-one, all told, including every one; this last time on leaving Port Canning it was thirty-eight. My crew was approved of by the Emigration Commissioners on the first occasion mentioned. On leaving Halliday Island some of my crew were laid up with fever and incapacitated from duty. Some of them could not have turned out in an emergency, but a great number did turn out after the ship struck. There were eight able seamen at work on leaving Halliday Island to the best of my belief; that left eight able seamen laid up, all the others including boys were at work. We had no great difficulty in purchasing our anchor, because the coolies helped us. A number of these men were knocked down on the way down the river the previous day. There were two cases of sunstroke. Dr. O'Sullivan saw the whole of them. Had we got out that night, I haven't the smallest doubt we could have made sail. We had double topsail yards, which facilitates labor very much. Although we had eight men sick, we could have mustered a large gang in a ship of that sort, from cooks and others, to clap on the topsail halliards, with a few men aloft. Going down the river, to the best of my knowledge, the Pilot's orders were carried out; he never made any complaint. After the ship struck, and during the night, the crew seconded my efforts in every way, working at the pumps and getting tackles up ready for the boats. There was no man in the chains before she struck. As soon as she struck a man jumped in. She was bumping for nearly half an hour. We slipped the chain after anchoring on the sand at about 7 P. M., and towed in a southerly direction up to 10 P. M., when the Captain of the steamer hailed us and told us the steam pipe had burst, and he must cast us off; we then anchored and found the water gaining on us all night. The night was passed in pumping ship and making preparations for hoisting out the boats. We got tackles up aloft for those that wanted hoisting. All the boats were bottom up, and there was no boat forward, filled with ropes, &c. We didn't prepare a raft, having a steamer with us, and expecting that she would come close to us and remain by us, so that we could have communicated by some means; and considering our own boats, six in number, ample under that circumstance.

By communication with the steamer I mean a line passed to her, and she at anchor under our stern. I got up a piece of Manillla out of the forehold for this purpose, my idea being to haul the boats backwards and forwards. I believe there was not the slightest thing in the state of the sea or the weather to prevent this. I hailed him as he came close under the quarter to do this, but he replied indistinctly that he was not in a condition to anchor there, and steamed away on the bow; this was after 9 A. M. after the boats were lowered and some of them swamped. We made up our minds to lower the boats at daylight, having at 1-30 A. M. made signals to the steamer to come to us. She came alongside about 4 A. M. I hailed him to keep close to us and be in readiness to pick up the boats. We then got the port quarter life boat, the starboard cutter, and the long boat in the water, and passed under the stern. The crews were picked out from the work at the pumps, and ordered into the boats by the Chief Officer. There were four men in each quarter boat and six in the long boat; we then lowered the women and children into them as fast as we could. There were no more men available to man the other boats. All the able seamen that were at work were in the boats except one and the Boatswain. The gig was launched by the Boatswain, the one able seaman, and by myself helping, she was launched over the stern. She was stove in launching. The Mate said there was a hole in her bottom that you might put your hand through, caused by the top of the stanchion going through the bottom of the boat. Every care and caution were used in launching her, considering the importance of preserving these boats; some 12 or 14 of us altogether had hold of her and launched her over. There was no gear to her. She was on the skids, and we had no tackles to hoist her out. We had no means of getting the boat into the water except launching her over the stern by hand. I consider that the most expeditious way under the circumstances. We broke down the front part of the poop rail to get her in on to the deck, and launch her right aft. The Engineer and Store-keeper, the Chief Officer, who was of no use on board from fever, otherwise a first rate man, then jumped overboard and got into the boat. They went neither with my orders nor against them. Thinking the ship was going right down they jumped overboard, as a matter of course, like everybody else. The Chief Officer jumped into the boat to take command of her. He went with my sanction. I was occupied in loading another boat on the other quarter, I believe Captain Hoskins' boat. The gig was as full as she could carry safely. They stopped the leak with a cap. When she reached the steamer she never came back again, and I heard that she went adrift. There was a very good boat on the skids, 22 feet long. I gave the Boatswain orders to launch her, which he partly succeeded in doing with the help of coolies and others. There was one European left, but he was sick. The boat got jammed, and immediately afterwards the Boatswain left the ship by jumping overboard, refusing to make any further efforts,—point blank. His name was Thomas Lockart. His words were "it's all very well for you to talk now, but it's too late, the ship's going down, and I must save my life as well as any one else." He deserted me contrary to my orders, just after I had given him orders in fact to renew his efforts at the boat. I was then left with only the four Topasses, add the one sick European. Several of the crew had previously jumped overboard whilst I was saving the coolies, and had saved themselves on pieces of wreck intended for the emigrants. I could not recognize them. With the exception of the Boatswain, there was no man who actually and positively disobeyed my orders. Numbers of

the men left the ship without my knowledge and went swimming away. McClune, A. B., went into the gig with my leave, and came for me afterwards. The Engineer went without leave, but he would have been of no use remaining, being in a weak state.

The Store-keeper had rendered me good assistance in lowering children into the boats and promised to remain; but he left. His name was Dermott.

Just after this the steamer came up alongside, and the Captain sent my Chief Officer in the life-boat, saying that he had made up his mind to leave, and that if I did not avail myself of that opportunity he would leave and go without me. At the same time every one on board the steamer was crying out to every one in my ship to jump overboard. If the steamer had even then anchored close to the stern and waited two hours, I believe everybody could have been taken off. It was nearly top of high water, the ebb was just coming down, and the water would have been comparatively smooth. The ship rode quietly at anchor all night, and comparatively quiet the next morning, until she became uneasy from having so much water in her, and there is no reason why the steamer could not have ridden at anchor also.

Under these circumstances I got into the boat believing that the steamer would leave, but with the intention of speaking to the Captain when got on board, but as soon as I got on board I felt so exhausted from exposure and from previous fever five times, that I found myself totally incapable of speaking to any one on any subject at the time. I had no strength to protest against the desertion by the steamer. I was nearly senseless. Mr. Carlisle, Lieutenant Maitland, and Mr. Vardy saw the state I was in; the two former helped me on board. I remained in this state about an hour and a half, as near as I can remember, and recovered my senses and came on deck. The steamer had been down and sighted the light ship, and was then returning up the Western Channel, and was near the upper middle Bulcherry Buoy. The wreck was in sight abreast of us. We passed 5 miles off to the westward of her. About this time I said to the Captain of the steamer, "this is fearful to leave all these poor creatures on the wreck;" and he told me his reasons, *viz.*, want of fuel, feed pipe damaged, threatening weather, want of daylight to get back to Halliday Island, and the right to save those already on board. His reasons did not satisfy me either in my mind or my feelings, although concurred in by all on board, but I made no formal protest, and the vessel proceeded on to her anchorage under Halliday Island, where she arrived before dark. I all along considered that the steamer was wrong to go away and leave the ship, and that she was not justified in doing so by any necessity. I am sure we should have got every soul out of the *Eagle Speed* if the Steamer had stopped another two hours.

4-30 P. M., *7th September* 1865.

September 8th 1865.

Re-called and re-sworn.

The reason why we could'nt pass another hawser when the hawser parted was owing to the sea that was running at the time, and to the steamer and the ship lying in such an awkward position right across the tide and sea. It wasn't the want of hands. The steamer's boat was engaged in doing this.

In the position we were drifting in the trough of the sea, it was decidedly an imperative duty either to have anchored or to have made sail and run up; we should have had nothing to do but to have hoisted our topmast staysail and set the fore topsail, and made other sail as necessary going before the wind. I did suggest anchoring. I was not aware of the sand or of the set of the tide right on to it. I should not have supposed from what was done that any one on board was aware of the drift. The reason assigned for not running back was that there wasn't sufficient daylight to get back into safe anchorage, and that it was better under the circumstances to pass the hawser and hold on the steamer, the Pilot still having hopes that when the hawser was passed the steamer have been able to have towed us out. Even if there had been an inner light, I don't think they would have tried to run back at that time, as they all had hopes of getting to sea that night. The reason why I gave way on the question of anchoring was that I had no local knowledge, and supposed the Pilot to know best regarding the channel.

The shift of wind took place after leaving Halliday Island at about 2 P. M. The steamer shewed her inefficiency to tow us ahead when the shift occurred and the sea made. I think that even at that time there were sufficient reasons for putting back considering the great responsibility. There was nothing to prevent our going back then; the ship was uninjured and 4 hours daylight. We could have got back to Halliday Island easily. The hawser parted at 4 P. M. We were two hours passing the hawser, and most of this time the ship was lying with her head to the westward, rolling in the trough of the sea; the steamer was ahead of the ship with her head in the same direction. Without reckoning the set a ship generally forges ahead in a line with her keel in the direction of her head, unless there is some counteracting cause. I know a very little of the language, having sailed with a lascar crew for about twelve months. We had an Interpreter on leaving Canning, also a Compounder who was thoroughly coversant with the language, and Mr. Vardy was frequently speaking to the

coolies on the way down. Captain Hoskins could also speak the language, and proved it by interpreting to the coolies a promise I had made that when we got out all the males who were not sea sick should have an extra allowance of tobacco served out, at which they were very much pleased.

After the Boatswain left, I had no one left to assist in launching the boats that were left, the two Topasses who knew the language were busily engaged under my orders in throwing everything overboard, and getting the coolies to go on them; the other two Topasses were forward. I don't think they were doing anything. They must have stowed themselves away. I called every one I could see. I think it might have been possible to have made use of the two Topasses to direct them how to launch the two remaining boats, but for the consternation that all of a sudden prevailed, caused by the steamer coming up alongside and hailing every one to jump overboard. I heard the voices of gentlemen aft singing out to jump overboard, but I couldn't identify any individual who did so; they spoke in English. Six of my crew heard me repeatedly ask the Captain of the steamer to anchor under the stern at about 10 o'clock; and I kept on hailing until he indistinctly answered me; these witnesses were—Dr. Donaldson, Mr. DeGrouchy, Chief Officer; Dermott; Wm. Booth, Carpenter; W. Ancell, Engineer; James Williams, Midshipman. I think the boats may have been stove through bad management; I can't say that they were wilfully stove. Captain Hoskins' boat was not stove. If the boats had been properly handled they should have lived in the sea, and also alongside the steamer. One boat was stove by the steamer having stern way, and the paddle wheels made a back revolution at the time she was getting alongside, and the paddle wheel and sponson struck her and knocked the stern out of her. Some coolies, as many as could be carried, went in the gig. I wish to correct my statement of yesterday that the Storekeeper went in the gig; he swam from the wreck to the steamer.

The Interpreter was one of 14 (coolies) that I saw go away on a hencoop and miss the steamer. The steamer did not go to pick them up; the hencoop passed within a quarter of a mile of the steamer; it was a very conspicuous object, and must have been seen. These men were all lost, unless they were subsequently saved in some other manner. The steamer used to come within a ship's length of us, not near enough for me to hail my crew to come back; besides I was so hoarse from continually screaming out all the morning that I could not have been heard more than a few feet off. I don't know of my own knowledge if my men were ordered to return, but the Chief Mate told me he ordered some of them, and they refused. I was not so hoarse, as I have stated, at 10 o'clock, when I hailed the steamer, but subsequently. The steamer never came whilst I was there with her bowsprit within four inches of the ship; if she had come even within 3 or 4 feet people would have jumped on board in numbers—they would have risked the rolling. I saw many of the coolies jump from the taffarel fully 20 feet to get on a piece of wreck or hencoop. I never saw the steamer nearer than a ship's length. He was very cautious. If the steamer did come closer, it must have been after I left the wreck. The boats always had to pull a long distance, and in several instances missed the ship from having to pull so far.

I fancied all the time that he was over-cautious keeping so far off. I have already stated that there was nothing to prevent him anchoring very close to us under our stern. If he couldn't have got his anchor again, he could have slipped. I didn't see any of my crew drunk. I should say that the whole of my crew were on board the steam tug by 10 A. M. The Chief and Second Mates, with James McClune and Robert Smith, A. B.'s, came back for me at 12-30 in the ship's life-boat, and took me away with a number of coolies. The sea was smoother under the stern than alongside, and as long as there was a boat the coolies could get into it. All the time that my boats were employed in conveying the coolies, the steamer's boats were unemployed. One of the steamer's boats was first employed during my temporary indisposition. I noticed the paddle-box boats when I was on the bridge after I had come round, and we were steaming back, and I asked the Mate of the steamer if those boats were made for use, and if they would swim. He said he did not know if they would swim, but in any case there was no means of getting them out, as they formed part of the paddle-boxes. They were bolted down, or at any rate there was a cant piece bolted down and securing them. I should say it was quite possible, notwithstanding this, to have pitched these boats overboard, and whether they came bottom up or not it ought to have been tried. One of these boats, even in a leaky state, could, if the steamer had anchored astern, have been hauled backwards and forwards, and every soul would have been saved. Even without a line of communication every man would have swam to the steamer had she been stationary. I considered that such of my crew as deserted the boats failed in their duty to do all in their power to save life. The officers can name these men. Nearly an hour was occupied in getting a crew for the boat that came for me. I wish to qualify the statement that I made that the Chief Mate jumped overboard, as a matter of course, as every one else did; I wish to leave out the words, "as a matter of course, like every one else," and to have recorded that he went by my orders. Before leaving the ship I went below and saw how high the water was up, it was within 18 inches of the lower deck. I considered the leak was in the scarphs of the keel and in the starboard strake. I thought she would have lived 4 or 5 hours at the time I looked at the quantity in her, that is, provided the rice did not swell and burst the ship.

The steamer on one occasion was an hour and a half from the ship, picking up men floating about, thus losing a great deal of valuable time, which would have been saved had she anchored near us.

Deposition of CAPTAIN BRINSDEN, *re-called and re-sworn.*

IF I had remained in the ship, I should of course have cut away the masts to form rafts, but I had made up my mind that the steamer would remain until all hands were saved. Had the steamer left me on board and deserted me, I could have cut away the masts, watching when she came broadside to the swell. I could have cut away the upper ones at any rate. I could have cut away also the lanyards of the lower rigging, and of course the lower masts would have gone of themselves in the roll of the sea. I don't remember seeing the second boat stove alongside the ship; she was a good boat, I bought her in London myself before I left.

The long boat was a first-rate boat, not more than two years old. A ship's long boat will generally last seven or eight years. The long boat was stove under the ship's quarter either by the awkwardness of the crew under the command of the Second Mate, who had no knife to cut a rope that would help her too close to the ship, or by the run of the sea. To the best of my belief the second boat went away whole. It was not a very bright day, but the sun was very powerful upon me. The sun was out every now and then with passing clouds. During the time the sun was out there was a strong breeze blowing, and the usual haze from the spray on the surface of the water, but I should not say the atmosphere was at all thick. I think if we had been looking for a buoy we might have seen it two or three miles off.

To the best of my belief the life-boat, under Captain Hoskins, made two trips between the steamer before she was laid up, besides three times he missed the ship.

Deposition of THOMAS DEGROUCHY, *Chief Officer of the "Eagle Speed," who on solemn affirmation sayeth:—*

WHEN the ship was anchored for the night, and it was known we should have to take to the boats, the Captain gave me orders to see the boats all cleared, and I gave orders to the Second Mate to that effect, and to get tackles up to launch the boats at daylight; I was sick with fever, and I was not able to attend to the work myself. About 2 A. M. we signalled the steamer. The boat with the Chief Officer came alongside, and I believe Captain Brinsden reported our ship sinking and requested the steamer to come alongside; she did not come until daylight. The Captain was on the poop. I told off four men to go in the port life boat; there was no confusion at all at this time. The boat was lowered, and dropped under the stern. Captain Hoskins had offered to take charge of her and was in command, as I was ill; a rope was passed and a ladder let down over the stern; Captain Brinsden commenced with the aid of the Store-keeper to lower the women and children. The men coolies were afraid to go, some were lowered down by a rope by the Captain himself. During this time Mr. Vardy had volunteered to take a boat; I was asked, and being sick, the Captain requested him to do so; the boat was lowered without confusion, except for Dr. O'Sullivan jumping into her. She dropped astern. When Captain Hoskins' boat was full, she took the place of his boat at the ladder; took in a load, and went off to the steamer.

Meantime the Second Officer was getting the other boat, the long boat, ready; she was got out by the tackles from the foreyard and mainyard, and safely lowered and dropped astern with two men and the Second Mate in charge; the rest of the crew followed, and she took a load of coolies off to the steamer. The steamer was an hour and a half picking up these boats. She could scarcely steam against the wind and tide, the boats being carried off by the tide; two of them were stove alongside the steamers, I heard. The life-boat was towing astern of the steamer with the crew and Captain Hoskins, not the coolies. The boats must have been stove by bad management: the steamer came alongside within half a ship's length and hailed "all who can swim jump overboard." I am certain it was either the Pilot or Captain who sung this out.

Previous to this the gig was launched over the stern by the rest of us and the coolies; she was stove in getting her over; she got half full of water; a man jumped in, stopped the hole with his cap, and bailed her out. I asked the Captain if he was going to leave; he said "No, I can't leave these poor men behind." He told me I could go, as I was no use to him, being sick and unable to stand on my legs. I lowered myself down by a rope into the water, and got into the boat with the help of the man in her. The Carpenter, Engineer, and Cook, and several coolies followed; we shoved off and went to the steamer. We got out and let her go adrift, she was too small and useless, so damaged. This was between 10 and 11 A. M. After this I was mostly sitting down on a chair sick. Afterwards Captain Hoskins came alongside, and saying he was ill, asked for some one to relieve him, and for another crew. Previously Captain Heath had put on a board for Captain Brinsden to come on board at once, as he would not wait if he did not come; I heard him say this.

Feeling too weak myself I requested the Second Officer to go in the boat for the Captain in my place; he said he could not go, because he wasn't able. He didn't say why

he was not able; I then asked Mr. Vardy, he said, yes, I will go in the boat. I then went forward amongst the men to ask them to go in the boat and they all refused, every man; I ordered them to go.

John Jefferson, August Rinston, Michael Shore, Thomas Lochart, Boatswain, Charles Wilson, James Macartny, Thomas Nutson, John Smith, Augustus Sperdel, all refused. I then offered them 10*s.* a piece to go, upon which Robert Smith and James McClune jumped into the boat, and the Second Officer also, the last mentioned, *i. e.*, Second Officer, didn't go until I offered the money.

William Maynard did not refuse, and went in the boat without being asked.

I can't say if the men went for the bribe and not for duty; they didn't go until the money was offered. I then asked for Mr. Vardy to take command; I didn't trust her with the Second Officer; I didn't consider him smart enough to take charge of a boat.

Mr. Vardy could not be found, at least he did not come forward; I went myself in the boat astern of the ship, and took the Captain and several coolies, a boy, John Thomas, a European, on board, and put them out into the steamer; the crew got out into the steamer and left me in her, the Second Mate last, the consequence was that the boat got under the sponson and got stove; this was the ship's life boat; the sea was high, but there was no danger. If the crew had remained, I could have made more trips; I had promised the Doctor (Donaldson) and also a European sailor I saw hanging on to the stern to go back for them. The name of the Second Officer was Henry Matthews; they were out of the boat before I could stop or forbid them; I was occupied fully in fending the boat off, and singing out to the Captain of the steamer to move ahead and save my boat from being smashed; I didn't order them back because the boat was stove; her rope had been made fast to the steamer. I got on board the steamer; the boat remained fast to the steamer, and could have been repaired in less than a quarter of an hour. She was passed astern after I got out of her, and I saw her there until I went below shortly after; I was so weak I could scarcely stand. In the evening when I came on deck, I asked what became of her, the Chief Officer replied that she had gone; she filled, and I suppose the rope parted. The Captain was perfectly sober, cool, and collected when I brought him to the steamer in the boat; but he looked ill. He could speak, and had all his wits about him; he was helped on board by two gentlemen passengers, Carlisle and Maitland. I didn't take notice whether he spoke to them; I didn't see what he did after he got on board the steamer; he was able to speak when he left the boat, I think he could walk, but I didn't see. In the evening when I came up I was so weak I had to drag myself along by the rail. I don't know whether the Captain protested against the Captain of the steamer leaving the wreck, I did not as Chief Officer.

I heard the Captain ask the Captain of the steamer to anchor close under the stern and pass a line, and I did myself twice when I was on board the steamer; I thought it possible. He answered me in an off-hand way, "all right;" I didn't hear what reply he made to the Captain of the *Eagle Speed;* he didn't do it. If I had been in health, I would have take every soul out of the ship in two or three hours more with one boat after the tide turned; I couldn't have launched the boat of the *Eagle Speed* on the skids with the coolies; I could with the four Topasses only if I had been in health. The four Topasses were all on board when I left, and to the best of my belief sober; I think they were all four among the coolies at the pumps.

I don't know why the Captain couldn't do the same; all four Topasses spoke English.

If the crew had stood by their ship, we might have made a raft; but there was no need for a raft if the steamer had anchored close astern. Dr. Donaldson was sober all the time I saw him aboard the ship; I should say Dr. O'Sullivan had had some liquor from the way he behaved in the boat, he kept laughing like a man half mad.

I know nothing about the consultation on board the steamer about her leaving the wreck, and my opinion was not asked. The Captain, while he was in my boat, didn't order the crew to go back, or pass any orders about saving more lives.

Re-called.

I mustered the crew by the Captain's request after leaving Halliday Island; all hand came aft. All the crew in the list now shewn me, except the Topasses, answered to their names; this was about 11 A. M.; there were two or three that looked weakly, but all the rest were able to work. When the hawser parted, I think 12 out of the 16 able seamen were at work; all came to work when the ship struck. Had we got to sea, we could have made sail and kept the watches properly. I am quite certain she was very lightly rigged and sparred, and I am confident I could have got sail on her with eight men only.

Deposition of MR. DEGROUCHY *re-called and re-sworn.*

I THINK Mr. Vardy was present when the crew refused to go into the boats. I am not certain on this point. I saw the black board on which was written that the Captain should come on board at once. I don't think the words were "this boat is for the Captain only." I never saw the steamer nearer the ship than half the ship's length. Had she gone within three feet, the coolies would have jumped on board. It is possible she might have gone closer after I went below.

Deposition of THOMAS MILLS, *Topass on board the "Eagle Speed," who on solemn affirmation sayeth :—*

I was a Topass on board the *Eagle Speed*. I couldn't speak Hindoostanee.

The steamer went away about 2 P. M. and left me. Some of the Topasses and one of the European crew and a few of the coolies put the boat over the side; the after-tackle carried away. One hand was in the boat at the time. I jumped down, she fell all right in the water, but pretty nigh full of water. We went to work, put a plug in the hole, and baled her out alongside. We then dropped her astern. When she was there, two of us and a few of the coolies were in her. The line broke and we went adrift with only one oar. We stuck the oar into the mast thwart, and contrived a sail with a piece of a coolie's wrapper. We ripped a piece of the stern sheet up to make a temporary rudder, with which I steered as with a paddle, and so we got back to the ship. We took the other two Topasses and the one European and the thirty-two coolies in all. When we left the ship, we shoved off with three oars, two more having been passed down to us from the ship. We steered with the bit of board half way up, then we lost it and were obliged to take one of the oars. We never had the rudder, that was washed out before we went adrift. We went along with the sail and mast made out of the coolie's wrapper and oar. The boat ran up safe into the Mutlah River. We left the ship between 6 and 7 P. M. We saw the steamer pass the ship again after 4 o'clock. I don't know the time. We saw her again the following day; she overtook us between 9 and 10 A. M. in the river, and took the men out of the boat, which they then towed astern.

When we left the ship the water was up within three feet of the coamings; the covering board was, I should say, about three feet from the water; the ship was not set on fire by any one. The coolies when we left were all on the poop, quite, quite, not praying or crying, looking at one another.

The boat was not badly jammed. We got her out without much trouble into the water. When the Captain left I wasn't on the poop. I was there in the early part of the morning. When the Captain went, I was on the main deck keeping the coolies aft, that is, from going forward to look at the steamer. I was not ordered there. There was another Topass, James Wilson, with me on the main deck; he was doing nothing. We didn't think of launching the other boat, and didn't try. I was helping the Captain on the poop in the morning. I went away because I was tired. When the steamer left, I thought I would be drowned, and began to study what to do, and we four Topasses made up to go in the boat; the European joined and helped. All the sailors ran away from the ship. I didn't, because I didn't think of it at the time. I was not asked to go in the boat. We Topasses are all four sailors. We could have manned the boat if lowered.

Deposition of WILLIAM KEMP, *sailor on board the "Eagle Speed," rating A. B.*

I WAS not able to catch the life-boat the last time she came, because I was seized with the cramp. I got up over the stern as well as I could; a Topass came down and put a bowline round me, and the other Topass hauled me up. I went into the forcastle and put on dry clothes, and then when we found that the steamer was going to leave us, we five turned to and agreed for to get the boat which was on the skids launched. We capsized her and hooked the after-tackle of the boat davits on to the stern ring of the boat; then we hooked the main top-gallant halliards on forward; then we pulled on the after-tackle, and as we pulled she slid out aft, we lowered her into the water and put a plug in her, put one broken oar in her, baled her out underneath the stern, then she went adrift with two chaps in her and some coolies; she was gone three quarters of an hour. The young chaps rigged a sail on the bit of a broken oar with one of the coolies' cloths and a bit of the sheathing to steer with, and got her up alongside again, she could lie alongside by holding her off so as to let the sea come up between her and the ship's side. We three that were aboard got two more oars, one was good and the other broken at the handle, and got into her with 32 coolies, we didn't dare take more, we got into her and took the coolies in from under the mizen chains alongside, she was so low from being so deep. The coolies didn't prevent our getting in, we shoved off, when we could take no more. The water had begun to wash on her decks when we left. The coolies were quiet, some were crying, they had all got pretty well into the poop cabin and stowed themselves away.

I didn't see the steamer after she went away. We saw a light at night going up about midnight, and on seeing the steamer next morning we thought it was her light. We had some bread and meat in the boat, no water.

One of the Topasses steered most of the way; we ran up with a coolie's wrapper and an old blanket I chucked into the boat. The steamer overtook us in the river. When the Captain went, I think I was on the main deck chucking things over for the coolies. I saw the Boatswain preparing to swim away. I didn't see him go, or hear him refuse to obey the Captain's orders.

We five launched the boat by ourselves without the help of the coolies, she was clinke built and light.

September 29th 1865.

Deposition of JAMES MCCLUNE, *Able Seaman of the late Ship "Eagle Speed," who on solemn affirmation, sayeth :—*

I WAS an able seaman on board the *Eagle Speed*. I went on watch at 1 o'clock Monday morning, and never left the deck until I went in the gig. I launched the gig over the stern with the assistance of a few of the coolies and the carpenter. I went into the gig to help to man her. After I had got into the gig, I stopped the leak and picked the Mate up, and had a tight job of it, as he had on a large cork jacket which would not allow him to bend, and he was helpless from fever. After this I picked up the Carpenter, the Engineer, the Cook, and about ten coolies. The boat towing astern full of water. These men came down by the painter. The cook was unable to pull an oar from illness; the Carpenter and Engineer did pull, the Mate steered. I kept the leak under. We got alongside the steamer, and as soon as I took my foot off the leak in her bottom, into which I had stuffed a hat and a bucket, she filled, and I saw her no more. When I left the ship, the Boatswain and five or six men, besides the 4 coloured men and the 3 boys, were on Board with the Captain and Doctor. There were enough to launch the boat on the skids if orders had been given to do so. No orders were given whilst I was there. Supposing the boat had been launched, there were men enough to man her left if they could have been got into the boat; there were some Dutchmen on board that ship who would rather have gone down in her than have manned a boat. I went myself and tried to get them, they would come part of the way and then dodge me.

The four Topasses were good men and could have manned the boat. Some of them were down in the 'tween decks screwing in the side scuttles, and keeping the coolies up out of the 'tween decks. I did not see two of them aft with the Captain. I say that if the steamer had come to an anchor, we could have run the boat with a hauling line backwards and forwards, and saved all we could. The long boat wasn't a good boat, even if she had not been stove. I don't know anything about her being stove. I can't tell why the steamer did not anchor. I heard my Captain hail her to come close alongside. I have been to sea about five years. As a sailor, it is my opinion that there was nothing to prevent the steamer anchoring close under the stern. I didn't hear any man refuse to go into the boat. I heard them asked by the Chief Mate to go, but some of them said they were sick, and some that they could not pull an oar. I don't knew their names, but I could identify them.

I didn't hear the Second Mate asked. He went into the boat. If the Mate had sung out for a crew to save life, men would have gone, but not to go for one man only, which was written and held up on a black board that "this boat was for the Captain only." Certainly the men knew that when a crew was called for it was for the purpose of saving life generally. The Mate got a crew and without difficulty. It is not usual to offer a reward to a sailor to go and do his duty. On this occasion the reward was offered as the men were going into the boat, and they would have gone as well without the offer as with it. The only man he offered it to, that I heard, was Maynard, and he replied that he did not want any ten shillings, and went into the boat. I also went. Robert Smith, A. B., and the Second Mate completed the crew, and the Chief Mate steered. One of the oars broke. We went alongside, at first we came under the quarter davits, starboard side, and took the boy off who was hanging on to the tackle fall; he jumped in, and a lot of coolies jumped down by the gangway ladder which was triced up underneath the davits where the quarter boats hung, the fore part of the mizen chains. I am quite sure that we lay alongside between the mizen and main chains and received the coolies there. I was keeping the boat off by fending off the gangway ladder. Supposing I had wanted to have jumped on board, I could have got on board quite easily, the rope ladder was hanging over the stern, and we then dropped the boat under the stern and picked the Captain and some more coolies off. The Doctor was on the poop. I can't tell why he didn't come in our boat. He might have missed her by going to the gangway just as we dropped under the stern. The boat had a pretty good number of coolies in her, but she wasn't full, because we dropped away from the ship, having no rope to hold on by when we got under the stern. We got to the steamer safely and the coolies got out of the boat. Our boat was so badly done up that we couldn't keep her afloat, her bow was knocked out of her by a blow from either the ship or steamer. The steamer's boat then went; she made two trips with Mr. Hoskins; she brought coolies each time; she got stove also alongside the steamer, the boat was then hoisted up. The steam boat then went up as close astern as possible, and picked the coolies up as fast as they jumped overboard. There was still that boat on the skids; none of us men hailed to the Topasses to launch the boat. Those on board the ship might have launched the boat or cut away the masts. So long as there is an Officer to give orders, no sailor takes upon himself to do anything without orders. Had I been left to myself, I would have cut away all three masts and made them fast astern, and there would have been rafts at once ready made. We could have insured their not falling in board by bracing the yards round, and watching the opportunity of the roll of the sea, keeping one shroud and one backstay fast till the last moment.

When I was alongside the ship in the boat, had the Captain called me to jump on board and assist to cut away the masts, I would have done so. The steamer could have

steamed alongside these spars and picked the men off without difficulty. I became aware that the steamer was going away, and that we were abandoning the people to their fate. There was one man of our crew who then said that we ought to take the steamer from the Captain, and go back and save the coolies. This man is in the hospital. His name is Peter Richardson. We didn't go aft and suggest to return to the wreck, because the Officers were all there; it was their place, if any thing was to be done, to order it. I did not know that the steamer was going until she left. The Captain of the tug hailed my Captain and said "If you don't come at once, I shall not wait any longer," and "I won't be humbugged waiting like this," or words to that effect. Every one on the deck heard what he said. There was nothing in the state of the weather to have in the least prevented the steamer anchoring under the stern of the *Eagle Speed*, and passing lines to the *Eagle Speed*. Even at the time she left, lines might have been hove on board from one vessel to the other. The steamer came so close to the ship you might almost have jumped on board. The coolies did not try this, but they jumped overboard, and as long as the steamer remained they kept swimming towards her. The steamer picked up as many as she could whilst she remained. We had lines all round and life buoys, but several were drowned close alongside. I did not see any of the coolies in the water at the actual time the steamer steamed away. The poop was crowded with the coolies when we steamed away. I didn't hear any shouts of despair at our leaving. When we took the Captain in the boat, he spoke to us; he gave orders to the crew to pull away, he was all right, he had on a cork jacket too. He came down the ladder, and dropped right down into the boat. I don't know why, when he was coming away safe in the boat, he did not leave his cork jacket behind for some one else. The circumstance of the Captain and Mate knocking about with cork jackets on discouraged the crew; it was as much as to say "well, never mind what may happen, I am safe at any rate"; and this from men who ought to have shewn some life to the last. When the boat got alongside of the steam tug, the Captain got up by himself. He was not too weak to get up. It did not strike me that he was prostrate and helpless. He never spoke a word to the crew from the time he got on board the steamer, until we met him ashore, that I heard. He walked aft, I believe, but I did not see him till the evening. When we left Halliday Island the number of working men we had on deck was 7 men. These were all able seamen. The Carpenter was also there, but neither he nor the Engineer are counted above. They were working at their own proper work. The state of our crew while on board the steamer, after leaving the wreck, was generally sick. John Jefferson was sick and unable. All hands who were sick came aft to assist when the ship struck, but when these men got on board the steamer the chills struck them again from their having been in the water.

Deposition of CHARLES STUART CARLISLE.

I was on board the Steamer *Lady Elgin* when she was towing the *Eagle Speed*. I was aware that the ship *Eagle Speed* struck and got water into her; I saw the Chief Mate on board the steamer after he left the *Eagle Speed*. He wasn't well, he seemed weak and done up from fatigue and sickness, he was able to move about, but not, I should say, fit for exposure.

I saw him go forward from the poop of the steamer and call for volunteers to man a boat to bring off the Captain. They shewed great hesitation in complying. One man came forward. I don't know his name. Nobody followed. Some of them refused in words, and others tacitly; they didn't give any reason for refusing. I heard one man say "he'd be damned if he'd go."

I can't say I heard the Chief Mate order them to go. He told them they ought to be ashamed of themselves. That they ought to go to bring the Captain away. He also went up to the Second Mate and told him to go in the boat. He refused at first, that is, he demurred. I can't swear he refused. After a short time he got into the boat, followed by three other men, and the Chief Mate went in the boat and took command ill as he was. I can't recall what words passed between the Second Mate and Chief Mate. I don't know the names of the men who refused to go in the boat, and couldn't identify them.

The boat with the crew and Chief Officer in her was towed astern the steamer. The steamer went close up to the ship, and Captain Heath hailed Captain Brinsden to the effect that he must come and leave the ship, and that he was sending a boat. I can't remember that Captain Heath said he would not wait for him, if he didn't. He hailed him twice in different times. I didn't see a board put up with anything written on it that I remember.

I didn't hear Captain Heath say aloud, so that all could hear, that he would not wait if Captaid Brinsden didn't come off.

I saw Captain Brinsden when he came on board the steamer. I was close by him as he got out of the boat. I assisted to take a cork belt off him which he had on.

He appeared weak and fatigued. I heard him say I want to go and lie down for half an hour, I feel quite done, or words to that effect. Mr. Maitland and several persons were round, and I think Captain Heath.

I can't recall whether Captain Brinsden spoke to Captain Heath, Captain Brinsden appeared to me very much fatigued. I can't say he appeared completely prostrated, and he was not incapacitated from expressing his wishes.

I didn't hear Captain Brinsden hail Captain Heath to anchor near the ship or under the stern.

The boat didn't return after bringing the Captain, because she got stove against the steamer.

She stove before the crew got out. After Captain Hoskins came on board after his last trip, he said we had better take the opinion of all as to what is to be done, or words to that effect. He asked Captain Heath about his coal. Captain Heath, after enquiring, said there was only just enough to go back to Canning; then Captain Hoskins said, all our boats you see are gone; we have no means of communication, the coolies won't come off to us, can we do any good here? or words to that effect. Each was asked his opinion, that is to say, Captain Heath, the Mate of the steamer, and the six passengers; I don't recollect that any one else was there.

Captain Heath said, "you see my coals are done, and it looks bad weather coming on." I don't recollect anything said about the feed pipe.

It was unanimously acquiesced in to return, and to send immediately for assistance. Nothing was said as to consulting the Officers of the *Eagle Speed*. The Captain was below, and the two Doctors and the Mate I think.

At this time no one thonght the ship would float through the night. The *Eagle Speed's* Mate, when he came on board, told me, he didn't think then that she would last more than two hours.

No other courses, except running back to Canning, were suggested as feasible to the passengers.

The way in which it was put to us, I think, by Captain Hoskins was, whether it was advisable to stay by the ship without being able to render almost no assistance, and risk the loss of the lives already saved as well as the steamer's company, or to run back to Canning. We were told the Barometer was very low, and bad weather appeared to be coming on.

I should have said that Mr. Vardy was at the consultation and took part in it.

We passed the wreck again as we came after running towards the light ship; we could just see the top of her hull as she rose to the sea.

When the hencoop with coolies on it, said to have passed the ship's steamer without her taking notice, floated by, the steamer was engaged in picking up others, off other pieces of wreck and timber. On two or three occasions the steamer went so near the wreck that her bows were within a foot; this happened when Captain Brinsden was on board the *Eagle Speed*.

Deposition of JOHN ALLSUM, *Topass, "Eagle Speed," who on solemn affirmation, sayeth:—*

I WAS a Topass on board the *Eagle Speed*. I was engaged by the Emigration Agent. I was one of four engaged by the Emigration Agent to look after the coolies. I was aft with the Captain passing the children down into the boats with bow lines. There was a boat on the skids. The Captain did not order me before he left to try and launch her. I did not see the Boatswain try to launch her, or any one else. I did not see the Captain when he left the ship. I was getting hatches and hencoops along to put overboard for the coolies to get to the steamer.

I saw the last boat leave the ship I was aft. I didn't go in her, because I couldn't get into her; I couldn't swim. I didn't try much to get into her, because the Doctor promised to send the boat back. The Doctor went down by the stern ladder and jumped into the boat I think. I remained to save as many coolies as I could. The boat did not come back. The steamer went away. We stood and watched her. We didn't know she was going till she went. I didn't think it was the right thing. We that were left consulted together how to save our lives, and we went to this boat on the skids. She was unlashed. She was not jammed, from this some attempt must have been previously made to get her out. We unhooked the main top-gallant halliards and hooked on to her, and looked on the after davit tackle, and the spanker throat halliards, to keep her from swinging out when the ship rolled. We got some coolies to assist us then to shove her out, they came readily. We lowered her and got her nearly in the water when the lift of the sea struck her in the bottom and unhooked the after-tackle, and she fell into the water and half filled, we let go the forward tackle, and Moses Smith and Mills jumped down into the boat, together with several coolies. We had a rope fast to her forward. These two men commenced to bale her out. I went down and Smith then came up to get the oars. We had one oar, but just then the rope broke and we went adrift and went astern. I had a sheath knife, and I tried to cut a rullock in the stern for my oar to lay in to try and scull her back to the ship, but the wood was so hard I couldn't do it. I then thought, as the boat had, I saw, a sailing thwart, that I would put the oar in that for a mast, with a sail made of a coolie's wrapper, and I ripped up a piece of the stern sheets to make a paddle to steer with, and we regained the hisp after having been away nearly an hour. When we got to the ship, we got two more oars and in the two other Topasses, and W. Kemp, the sailor, belonging to the ship. We also took

a compass. William Kemp put in a couple of blankets, which we rigged next morning in the river. We then took altogether 32 coolies and shoved off. We had a long line laying off the quarter, and we would watch the smooth and let her come alongside, and the coolies would jump in. When we had got as many as we could take we shoved off. When we shoved off the coolies were looking at us, they must have felt that their last hope was gone, but they didn't say anything to us. I was sorry enough to leave them.

There was another boat forward, but we didn't think of it. We did not think of cutting away the masts, nor of making rafts; we could have done this if we had thought of it. I have been 19 years at sea. I was born at Halifax, Nova Scotia, and was brought up to the sea. When we shoved off from the ship we made sail on the oar with a coolie's wrapper. The wind was right aft. We just made fast one end to the oar and struck the oar in, and held on both corners below, and sailed up all night. We had to keep her right before the sea, as the boat was very low in the water with so many people. We steered the boat by an oar. We never broached to. We shipped a little water sometimes, and then had to keep her right before the sea. Her bow was about a foot out of water and her stern about 2 feet.

We ran up North by the compass till we saw a light. We thought it was a light-house, and altered the coarse to North by East, and found ourselves in the river next morning. In the morning, as our sail had blown all to pieces, we had to take the blankets, and by the time we had set the blankets, we looked astern and saw the smoke of a steamer, which turned out to be the same steamer that had left us the previous afternoon. We had passed her in the night. She overtook us. We were not going on board of her, we were going on shore to get water, not wishing to have anything to say to her after her leaving us as she did. She then lowered a boat, which came alongside, took hold of our painter, and towed us alongside the steamer. When we got alongside our shipmates were very much surprised and very glad to see us. I didn't notice what sort of a boat it was that came to us. The Topasses were all sober the night preceding and the day of the wreck. I didn't know anything about the Compounder giving any of the Topasses liqour. When I saw the Compounder on the morning of the wreck he was sober. I didn't see him leave the ship, but I saw him in the Railway train coming back to Calcutta.

September 11th, 1865.

Deposition of LIEUTENANT W. G. MAITLAND, *29th Punjab Regiment, who on solemn affirmation, sayeth:—*

I WAS a passenger on board the *Lady Elgin* tug steamer. After the *Eagle Speed* struck, the steamer towed her until 9 P. M. about or longer; I went down below to sleep at 9 P. M.

About 1 A. M. I was awoke, hearing that signals were being made from the *Eagle Speed*. I went up on the bridge. The steamer's boat meantime had gone alongside the *Eagle Speed* under charge of the Chief Mate, Mr. Conroy, and returned with the news that she was sinking, and that we were requested to keep close by her. Steam was ordered to be got up quickly. About 4 A. M. we weighed anchor and ran close to the *Eagle Speed*. About 6 A. M. the first boat came, under Captain Hoskins, with women and children.

A second boat then came under Mr. Vardy bringing Doctor O'Sullivan. Whilst taking the first boat load on board, we drifted a considerable distance, and had to tow the first boat back; the second boat was stove under the sponsons.

The third boat came in charge of the Second Officer and also got stove.

The fourth came under the Chief Officer, and didn't live long after she got alongside; I don't know what became of her.

The greatest distance the steamer was from the *Eagle Speed* while these boats were passing to and fro was, I should say, about a mile and half; I can't give any accurate idea as to how far, on an average, the steamer was distant from the *Eagle Speed* while the boat were passing. I can't say she was not sometimes within a ship's length, or that she was.

While the boats were passing, in the intervals the steamer was employed in picking up coolies off floating timber.

Captain Hoskins worked his boat for several hours until about 10 A. M. when he came on board exhausted, as were also his crew. Mr. Vardy said he would take command, but I didn't see him get into the boat at all. Subsequently, about an hour after, the Chief Mate of the *Eagle Speed* wanted to man a boat with a view to bringing the Captain of the *Eagle Speed* off, but the men shewed a great unwillingness to go. I didn't hear the Chief Mate actually order them to go. I didn't hear what he said. Eventually a crew was got together; the Second Officer of the *Eagle Speed* took an oar; he was decidedly unwilling to go at first. I didn't hear him speak, but he tacitly shewed his unwillingness and tried to get out of it. The Chief Officer, though very sick, took command of the boat. The Captain was brought off, and I assisted him over the rail of the steamer; he was then looking very done up. With him came also some coolies; I don't think the boat was quite full. I am not quite certain about that.

I was on board helping the Captain in. I didn't see what became of the boat and crew.

Captain Hoskins then took the steamer's boat and went to save the Doctor, who got on the ladder over the stern of the *Eagle Speed*, and would not move one way or the other; but a

lot of coolies were brought off. The boat went a second time, and after much trouble they managed to make the Doctor jump into the water, and pulled him into the boat; some coolies were also brought this time.

In getting on board the steamer the boat got stove, partly through the crew jumping out, and partly through the awakwardness of the Doctor; the hook got under the seat and tore it out, and the side stove in hauling her in. After this we stayed about an hour, as far as I can remember, picking up people who were floating about; several times we went very close to the ship, but not so many jumped over as was to be expected.

About this time it was found that we had only enough coal to take us back to Canning. A consultation was held; I am not clear who called it; I fancy it was Captain Hoskins. The passengers were present, and Mr. Vardy, Captain Hoskins, and, I think, Captain Heath; no one else.

We were told, I can't say by whom, that we were short of coal. I know Captain Heath went and asked the Engineer about the coal. Captain Hoskins came round and asked us all what our opinion was. We were unanimous for returning and sending help down from Canning. We thought it better to place the lives saved in safety, as the water appeared unsettled. Accordingly, not knowing where we were at the time, we steamed towards the light ship; this was about 1 P. M. I fancy. We sighted her, I heard, at about 2 P. M., and then turned and steamed for the Mutlah, and anchored that night at about 6-30 P. M. at Halliday Island.

During the night it blew very heavy with rain. It seemed to me it must be worse weather at sea than when we left. Next morning, as we were steaming up the river about 7-30 A. M., we sighted a boat; we lowered one boat, the biggest boat, the one which had been stove in hauling in, and took her in tow. On getting her alongside we found she contained one European, four West Indians, and 32 coolies, and one woman; they had a kind of sail, a blanket, I think, rigged on an oar. They had no rudder, but they had provided themselves with a compass, a lantern, some clothes, junk, and cigars; I can't say as to water.

I didn't see any light or rockets from the light ship during the night of the 21st, nor did I hear that either were seen.

I did not hear the Captain of the *Eagle Speed* hail the Captain of the steamer in the morning to anchor alongside or near the *Eagle Speed*.

I heard the Captain of the *Eagle Speed* hailing several times; what for I could not hear. I heard Captain Heath on one occasion answer to the effect, I think, the steamer was as close as she could go, or that he couldn't go closer. I fancy she was about one ship and a half distant at the time I mention. I can't say that any of the boats were wilfully stove.

The reason why it was necessary for the Chief Officer of the *Eagle Speed* to get a boat to bring off the Captain was that Captain Heath was in hurry to get away. I heard him, Captain Heath, say aloud, not to any one in particular, that he was in a hurry to get away on account of the coal. I didn't hear him say that he would not wait for the Captain of the *Eagle Speed*.

I didn't see a board put up with anything written on it.

I can't identify the men who were unwilling to go for the Captain of the *Eagle Speed*.

When I helped the Captain of the *Eagle Speed* up, he could walk, but walked like a weak man. He was not incapaciated from expressing his wishes.

He expressed a wish to rest. I think Captain Heath was on the bridge then; I don't know.

The Captain of the *Eagle Speed* went below at once. I think I saw him asleep on the stern locker down below. No other course, except going back to Canning, was suggested at the consultation as feasible to my knowledge.

We passed the wreck in returning after sighting the light ship about two or three miles off.

I think the crew saved two bags. I pulled two bags up out of one of the boats, and in another boat some compasses and chronometers in their boxes came. I saw a small hand bag or valise also; no portmanteaus.

I don't know what became of the boat during the interval of about an hour which elapsed after Captain Hoskins and his crew got out of her exhausted to the time when the Chief Officer took her to the Captain. I should have seen her if employed in making trips to save life during that time.

We understood, when we resolved on returning to Canning, that the *Eagle Speed* had a very short time to live.

Deposition of ROBERT MCMASTER, *Commander of the Buoy Vessel "Grappler," who on solemn affirmation, sayeth:—*

I WAS in command of the floating light ship at the entrance of the Mutlah on the 21st August last. I saw a ship and steamer coming out at 3-30 P. M., trying to tow out, bearing N. E. and by N., distant about 16 miles. I saw them myself from the deck with a glass; they were athwart the channel at the time heading to the Eastward; they remained within sight up to 6 P. M. still with their heads to the Eastward; they had then drifted in about a

mile. At the distance we could not make sure of the direction of their heads, but they were athwart the channel.

We shewed the usual lights that night, *i. e.*, the usual yard-arm light, and a rocket at 8, 12, and 4: a rocket can be seen about 12 miles off if you are looking in the proper direction; it is only visible about 10 seconds. We don't burn blue lights, in order to distinguish the Mutlah Channel from the Hooghly. A blue light, such as used on the light ships in the Hooghly, can be seen 30 miles according to the weather, ordinarily you can see them at 20 to 25 miles. No blue lights or rockets were seen from my ship on the night of the 21st, or early in the morning of the 22nd, in the direction of the vessels mentioned.

I didn't see the *Lady Elgin* Steamer at all on the 22nd.

Had I been signalled, or informed by the steamer running down, that a vessel 18 miles off, up channel, was sinking with 300 lives on board, I would have slipped and run up and saved as many as I could of them. The distance was 20 to 21 miles off, as the Centre Bulcherry Buoy, abreast of which the wreck occurred, has been moved since the re-survey of the river, a mile and three-fourths to the northward.

I could have run up alongside in about three hours on the date in question.

I commanded the *Despatch* and the *Charlotte*, pilot schooner, in the Mutlah, before I commanded the floating light. I commanded the *Charlotte* down to the 27th January last, from the 9th August 1862, *i. e.*, 2½ years. I cruised up and down the river frequently two or three times a month. I usued to examine the channels and the buoys, and report when they were out of position.

I didn't find any difficulty in navigating the river for want of buoys.

When I last went down the river about the 6th of May last, the buoys in the Eastern Channel were all in position and in an efficient condition. The outer R. R. Buoy had the spire broken. I didn't go down the Western Channel.

I was down in the *Lady Elgin* after that in the Western Channel, but at night time, and couldn't see the buoys. This was in July last. The circumstances were as follows:—The *Lady Elgin* took two ships in tow from Halliday Island. I was a passenger on board of her. She towed all day, and got down two or three miles south of the Spit Buoy near where the *Eagle Speed* was abandoned. At 6 P. M. the barque *Gabrielle's* hawsers parted, moderate swell and wind S. S. W.

The *Gabrielle* made sail and proceeded by herself out to sea. Mr. Vardy was the Pilot. We continued towing the other ship all night, and reached the light vessel at 6 A. M., having made it at 3-30 A. M. The rocket was reported by the Serang at 8 P. M., or about 15 miles off, we didn't see anything, *i. e.*, any light from 8 P. M. to 3-30 A. M.

The outer 5 buoys marking the Eastern Channel are, I consider, of sufficient size. They are second class buoys.

The Ring Buoy is a third or fourth class buoy. It ought, in my opinion, to be a second class buoy. I consider an inner light an absolute necessity for the safe navigation of the river at night. If a ship is caught about the R. R. Buoy and not able to get out with a heavy sea on and wind S. or. S. W., there is good anchorage at the anchoring buoy; not so with the wind at S. E.; with the wind at S. E. or S. S. E. she must run up to the Ring Buoy.

If you can see the anchoring buoy before dark a ship can shape a safe course to the Ring Buoy after dark; it is only about 8 miles.

If my light ship had shewn a light equal to the Hooghly Light, that is to say, a blue light, it would have been visible to the *Eagle Speed* where she was wrecked, and shewn them their position.

I have seen the Spit Buoy from the deck of the *Charlotte*, 5 miles off, with height of the eye about 10 feet, *i. e.*, at an elevation of about 10 feet. The Centre Bulcherry Buoy, being a second class buoy, ought to have been visible from the deck of the *Eagle Speed* 3 miles and a half off during the daylight; it ought to have been seen at the elevation of her deck, say 20 feet, with a heavy swell on, at 6 miles off. The Spit Buoy even ought to have been visible from the wreck.

If the *Eagle Speed* was wrecked 3½ miles from the Centre Bulcherry Buoy, the buoy must have been visible, or even at 6 miles distance. I see no necessity for the *Lady Elgin's* having to run down to sight me to know her position.

I consider the buoys in the Eastern Channel sufficiently numerous. In the Western Channel there ought to be one half-way between the Spit and the Lower Eastern Bulcherry Buoy. We found no difficulty in towing down the other ship of the two, on the occasion I mentioned at night for want of that buoy.

On examining the chart of the Mutlah of the re-survey, I find that the Centre Bulcherry Buoy is correctly laid down, and the distance from the wreck to the floating light I find by measurement on the chart from the bearings given in the report of the Captain of the *Lady Elgin* was 15 miles, which I could have run in 2½ hours. The distance from the wreck to the Ring Buoy will thus be nearly 12 miles; and therefore blue lights or rockets from a light ship at the Ring Buoy, if there had been one, would have been visible from the wreck; ship could have run up easily from where the wreck was to Halliday Island after seeing the

blue light. On the 22nd ultimo we had a nasty dirty night outside, wind, I think, southward at 6 P. M., and a heavy ground swell.

With the wind and sea we had the *Lady Elgin* as a sea-going steamer would not have been in any jeopardy if anchored for the night abreast of the wreck, and supposing the weight of 425 coolies, adults, equals 17 tons, and one-third put below, that amount of top weight, in my opinion, might not have been dangerous; I don't think it would have been dangerous for a ship of her size. I believe she had 50 tons of ballast. If danger was apprehended on that score she might have taken a hundred less.

Deposition of BOLDERO CONRY, *who on solemn affirmation sayeth:—*

I WAS the Chief Mate of the *Lady Elgin* when she towed the *Eagle Speed* down the Mutlah. That was my first trip in her. I was only in her a few days. I left her because I am going round to Bombay, having been always in sea-going ships. My place of abode is Bombay, and I wish to get there quickly. At present I am Mate of the ship *Combermere*. I hold a Chief Mate's certificate for foreign service. The *Lady Elgin* towed the *Eagle Speed* after she had grounded until nearly 10 o'clock at night, on the 21st, when the feed pipe got out of order, and we had to cast off to repair this. We anchored and gave her 60 fathoms cable. There was a sea on; now and then there was a surge on the chain, and we had to stopper it—a common precaution. She rode safely, but rolled considerably. Between 1 and 2 A. M. on the 22nd, in consequence of blue lights and rockets being shewn from the ship, I was sent alongside in the boat. I went alongside and was told the ship was sinking, and to bring the steamer close alongside to discharge the coolies. I then pulled back to the steamer and reported to the Captain, who gave me orders to have short, and also ordered the Engineer to get steam up as soon as he could. I can't tell whether the fires had been let out, or were banked. We got steam up by 5 o'clock, when we steamed ahead of the ship, and told the ship's people to get the boats ready. The boats were not in the water. They answered "all right." One of the boats was then lowered, and Captain Hoskins came alongside the steamer with women and children. When we had picked this boat up and taken the people from the boat, we had drifted away astern of the ship. It was flood tide. There was no reason why the steamer should not have anchored close astern of the ship; none at all. This would have saved a great deal of time occupied in drifting and making our way back to the ship, as we had to do on such repeated occasions. Having just picked up our anchor, after having laid at anchor in safety, it could not have been on the score of any difficulty in anchoring or riding at anchor. If we had commenced at first to pass lines to the ship, the boats could have been passed to and fro without difficulty by this means; and it could have continued to be done. I never heard the Captain of the steamer asked to anchor. I didn't hear the Captain of the *Eagle Speed* hail to anchor.

I can't tell whether I heard Captain Heath answer any hail. After Mr. Hoskins had delivered his boat load, we towed the boat up to the ship, having been away fully an hour, during which we had only received this one boat load. Mr. Vardy then came in the second boat, he having been waiting till we came near that he might fetch us. The bows of his boat were all stove in. He came alongside with the bows stove in. When the boat came alongside the women and children were got out, and Dr. O'Sullivan who was also in the boat. The crew passed everybody up, and then came up themselves. Mr. Vardy was the last that left the boat. About five planks of the bow were stove. Mr. Vardy asked the crew to go back, but they refused on the ground of the state of the boat. She couldn't have gone back with any safety. One of the men let go the painter of the boat, and let her go adrift. I don't know the man. The third boat then came alongside in charge of the Second Mate. I can't tell what boat it was. When the Second Mate got alongside, he and the crew wanted to come up on to the steamer. I sung out "pass the coolies up first,—do you call yourself Mate of a vessel?" They then stopped and passed the people up, and they followed. I can't say whether this boat was stove or not, although I was looking over the side at her. Mr. Vardy and I told the Second Mate and men to go in the boat again. I said, "You had better go and make another trip." I pressed it upon them, and even reported to the Commander of the steamer that they would not go. He spoke to them too; I believe, to the best of my recollection, that their answer was that they were exhausted. I was certainly of opinion that the boat could go back again. The men said nothing about the boat being stove. There was some water in the boat enough to fill 5 or 6 buckets, but nothing of consequence or to prevent the boat going back again that I could see. It didn't strike me to put a crew of lascars into the boat. It could have been done if it had been thought of. I myself had pulled to and from the ship with lascars a few hours previously. The Captain sung out to make the boat fast alongside, and we steamed away to pick up coolies that were floating about on pieces of wreck. We could have manned the boat, but we couldn't have shoved off untill the steamer had towed us up to the ship; we were a long way off. The boat would have carried in that sea about 20 coolies, which is a good number in one trip, compared to picking up individuals off numerous floating pieces of wreck.

This repeated drifting of the steamer caused a most serious loss of valuable time, when every moment was of importance. Still the steamer was not anchored, and I, as Chief Officer, did not suggest it to the Captain.

It was now about 10 o'clock, and all this time we had only got three boat loads alongside.

The steamer steamed ahead full power. The thwart of the boat last mentioned carried away; the boat gave one sheer out, came in under the steamer, and was smashed alongside and went down. After Mr. Hoskins had delivered his cargo, he was towed astern to go back to the ship. We towed him back to the ship, but he failed twice to reach her, and was twice towed back again, succeeding eventually in reaching near and picking up coolies in the water. Once we went abreast, and once ahead of the ship. On two occasions, instead of making fast astern, the boat went to pick up people in the water, which she brought to the steamer; whilst the life-boat was away thus, the fourth boat came to the ship, she was the gig. The Chief Mate and some Europeans were in the boat. I didn't see any coolies in the boat. I don't know whether there were coolies or not. As soon as she came alongside she swamped. This boat was in a very leaky state. I was not aware that she had a large hole made in her bottom in launching. As soon as she came alongside she went down.

Our own boat was on the davits all this time doing nothing. Seeing the want of boats, from boats swamping one after another alongside, and viewing the prospective loss of life, I never lowered this boat. I got no orders from the Captain to do so, and did not suggest it. When Mr. Hoskins returned to the ship with the load of coolies that he had picked up out of the water, he was exhausted and wanted to be relieved. He and the crew came on board. Captain Heath told some of the other men to go in the boat; many of them refused. He told me to put my own crew into the boat and go to the ship. At this time the steamer was a long way off from the ship, for about the fourth or fifth time. I called up my men to go into the boat, but the gentlemen shamed the Europeans, and they went into her. Having got my crew ready, I also might have shoved off in our own boat if I had got orders to do so. I didn't get orders, and I didn't propose to go. I was perfectly willing to go just before, but, as before said, I didn't propose to go in our boat when the Europeans had manned the ship's boat.

The Chief Mate of the *Eagle Speed* went in charge of this boat. He brought the Captain and some coolies. I didn't see anything written on a black board and held up. I didn't see it or hear of it. When the boat came alongside, they got her under the sponson and the stove her. The stern of the boat was to the head of the steamer when she came alongside, and the stern got caught under the sponson and was smashed. We passed her astern and towed her still she went down. The Captain came at about noon. I didn't know why there was any special reason for sending a boat for the Captain at this time. I did not hear the Captain of the steamer say anything about going away at this time. He was on the bridge. I was on the main deck. I can't tell the reason for this sudden move of the Chief Mate to take a boat for the Captain. I saw Captain Brinsden when he was going down into the cabin. He appeared rather exhausted. He spoke two or three words to one of the passengers. He walked alone and went below. He did not consult with Captain Heath that I am aware of. At this time the life-boat having been disposed of our boat was lowered by the Captain's orders. I don't know if he was asked for the boat, but Captain Hoskins went in her with four Europeans. They reached the ship and brought off some coolies and a European lad. They got safely to the steamer, and were not smashed alongside. They then went back for the Doctor and brought him and a lot of coolies. They came alongside and then smashed the boat. She was a clinker built boat; her gunwale in the bend of the bow was broke right across, three planks were stove in from the gunwale down; she couldn't make another trip in that condition. There was then a consultation below what should be done. Captain Heath said his coals were getting short. Captain Hoskins proposed the best way was to go to Canning Town, discharge the coolies, coal and come back. I can't say how far we were from the Centre Bulcherry Buoy. I didn't see it. I didn't look for any buoy—never thought of one. The Captain of the steamer went down the channel to sight the floating light to ascertain our position. Going down the man at the mast head reported the masts of a vessel, and right abreast of the steamer there was a black buoy on our starboard side about 2½ miles off. I forget whether it was a black or a red buoy. We then turned back. I was on the bridge keeping my eyes about me. On going back we passed to the westward of the wreck about 2½ to 3 miles from her. As we passed her, she being on our starboard hand, I didn't notice any buoy on our port side. If the position of the buoy is as pointed out, we ought to have seen it at 3½ to 4 miles distance. I did take notice of the Ring Buoy, because I was on the paddle-box at the time; I saw that about four miles off. I can't say what the size of the buoy is; it had a spire. I can't say if it had a basket. We anchored at Halliday Island at half past 6 or 7. We had a fair breeze going back, with now and then a gust, and squalls with rain. The next morning on the way up, off Peel Islands, we saw a boat, we stopped and sent our boat (being smooth water, we sent her as she was stove,) and towed her alongside; she contained 4 Topasses, 1 European sailor, and 32 coolies, who had been saved by these Topasses and the European, by launching the boat from the *Eagle Speed* after we had left.

At about 11 o'clock in the forenoon of the 22nd, I proposed to Mr. Vardy and Captain Hoskins to slip the *Eagle Speed's* chain and run her up under sail and beach her on Halliday Island. It was still flood, strong fair wind. We could have carried all sail, and I believ

she might have been got up even then. The only answer I got was the ship was water logged, and would not be manageable, and they were in the expectation of the vessel breaking in pieces in two hours. Going to Canning for assistance was no use under such circumstances. We could have got on board by the channels or clambered up by ropes, and have made sail. It was worth while to try, at any rate, and run up as far as we could. The nearer the land the greater chance of more men being washed ashore when the ship should go down. It did not strike me to advise cutting away the masts at the last moment. I see the feasibility now certainly, but I did not think of it at the time. I believe the feed pipe was temporarily repaired during the night of the 21st; it carried us up all right to Canning.

Deposition of CHARLES DERMOTT, *Store-keeper on board the late "Eagle Speed," sworn, sayeth:—*

My duties as Store-keeper were to serve out the stores to the coolies, carry out the Doctor's orders, and to superintend the Topasses and everything connected with the coolies, their cookery, &c. I remember the first boat being lowered on the 22nd ultimo. I lowered the after-tackle myself. I saw the long boat after she was got out. I saw her under the stern. She got foul of some ropes hanging over the stern. Her painter got foul of them, so that she could not be slackened away astern, and when the sea came up she got dashed against the stern. This happened repeatedly. She received severe injuries on the port quarter before she was hauled to the starboard quarter to receive the coolies. But for these injuries I should certainly say she was a serviceable boat. She would have acted as well as the others, and would have carried a number, being the largest boat. I saw some chronometers and a small portmanteau in one of the boat's astern. The life boat was lowered in an orderly manner. I did not see where the crew was obtained from. I saw them coming aft, and two of them jumped in the boat and were lowered down in the boat. I did not see the second boat lowered. I helped to launch the gig. One of the nuts of the stanchion went through her bottom in launching. I saw no attempt made to launch the boat on the skids. I left the ship an hour and a half before the Captain. I got on board the steamer by 10 o'clock. I left because we were hailed by the steamer to jump overboard, and I saw every one providing themselves with cork jackets and life belts, and as I could not swim, I thought I had as good a right to save my life as any one else, being also very much knocked up. I asked the Engineer for one of two life buoys that he had and he gave me one, and I jumped overboard and made for the gig, but missed it. The gig was astern, and I kept paddling with my arms to her, but missed her. I had my cap, and I kept waving it over my head, and they answered me from the steamer's bridge. I was drifting down towards the steamer, and they hove me a line and I was hauled up alongside. When first the steamer came to the ship in the morning, I heard the Captain of the *Eagle Speed* hail the Captain of the steamer to anchor near. He made a reply, I know not what, but did not anchor.

Whilst I was on board the steamer I saw a board held up. The words on it were—"This boat is for you only." I don't know who it was held up by, but I am almost certain it was one of the passengers. I can't say why the boat was sent away in this manner to bring the Captain, unless it was that the wreck was expected to go down immediately. I did not hear Captain Heath express any impatience at remaining. Whenever I saw him picking up the coolies, he was exerting himself very much. I did not hear any positive order given by the Chief Officer to the men to go in the boat. I saw him go round amongst the men and ask them and tell them, but what I call a positive order I didn't hear. The Second Mate did not set the example of going. He made some excuse at first, but afterwards went. The Chief Mate made an offer of 10 shillings to any man who would go, but just at that time the men made a movement towards the boat. Some of the men were very poor, miserable men, but there was a number of good men amongst them, and I didn't see any reason why they shouldn't have done their duty and gone back to the ship. Some of the men who laid up for sickness were not, in my opinion, really sick, and might have exerted themselves more. I speak from my experience of sailors, having frequently served out medicines to them as steward of a ship. The Chief Mate was very sick. I have followed the sea for 15 years. I am a Prussian by birth, but I have been on board American and English ships the last 11 years.

The coolie life buoys were made of solah covered with their cotton cloth, not painted.

I saw one of them go to pieces; but one of them held me up for half an hour and saved me. Five people wearing life buoys jumped into the gig. I never saw a coolie with one of these life buoys specially provided for them, the people belonging to the ship appropriated them to their own use. There were eight life buoys altogether. The Captain and Mate put on cork jackets, and one Midshipman.

September 13th, 1865.

Deposition of WILLIAM MAYNARD, *who on solemn affirmation sayeth:—*

I WAS an able seaman on board the *Eagle Speed*. I was on duty all the time from leaving Canning until I got on board the steamer. I remember the hawser parting well. I

was assisting to pass it again. There were eight men and the Second Mate on the forecastle with the Pilot at work trying to pull the hawser in. The Carpenter was sick. I never saw him after we hove up the anchor at first starting until the ship struck, when we let go the other anchor. There was no one else at work that I was aware of. One of the boys was laid up with sunstroke that day coming down. We were an hour and a half, I should say, getting the hawser passed and then we had to get the coolies to hand it in. The Captain of the steamer lowered his boat to give us a line to haul his hawser on board of us. This took twenty minutes to half an hour before we got hold of the line. After we got hold of the line, the boat went back to the steamer, we began to haul away immediately. The line did not carry away at all. It took us an hour and a half before we could get the hawser on board. The Second Mate was pulling with us, nine men in all. The reason why we could not get the hawser in was that the steamer kept away and had the hawser in the water like a rainbow, and we couldn't pull it under such circumstances; even with 20 men we couldn't have pulled the hawser in the way the hawser laid. At last we got the coolies upon it, and hauled it up. Providing the steamer had kept to the eastward ahead of us that would have kept the hawser straight, instead of that she went right round in a circle. I remember the ship taking the ground, it was about 6 or 7 P. M. The anchor was let go after she had struck the third time. She only struck once after the anchor was let go, very lightly. She struck pretty hard the first and second times, but no so hard the third time. She knocked off a piece of her false keel the second time she struck. I didn't see this, but heard so. She was towing ahead when she struck. The fourth time the ship struck lightly, and the Captain said "Never mind, boys, the tide is flowing and will be all right yet, slip the chain." The Captain sung this out from the poop. The Pilot was on the forecastle. I was standing by to give her chain on deck. The Pilot did not give the order to slip. I can't say why the Captain gave the order, except it was for safety. We slipped and towed into deeper water, until we anchored for the night. I was at the pumps until about 9 P. M. when I went to my tea, and then I went and relieved the man in the chains. I didn't turn in that night at all, never closed my eyes.

The pumps were hard at work all night with the coolies and the crew that were able to work. All hands turned out at 12 at night, sick and all, and went to the pumps. I was one of the first men called to go into the boats when it was determined to lower them. The coolies left off at the pumps at 5 o'clock. I went into the life boat between 4 and 5 A. M. I remained in the boat until nearly between 11 and 12. When Captain Hoskins gave up charge of the boat, I went out of her for a drink of water at the same time. Captain Hoskins said he wanted to be relieved, and another boat's crew, and the Mate went forward, and asked the men whether they would volunteer to go in the boat and relieve the crew that had been in her, and when I heard him ask that I stopped on board to rest.

We made first one trip from the ship to the steamer, and then made an attempt and failed twice, but picked up coolies. I went back into the boat a second time to fetch the Captain, and took him to the steamer. I was then knocked up, and went out of the boat. I can't remember whether that boat went back again, but one did go. The Captain of the steam boat said to the boat's crew when we went to fetch the Captain, "Tell the Captain from me that if he doesn't come off in this boat I won't wait any longer for him." We told the Captain that and he came off with us. When we went to the ship we fetched under the stern. I can't remember laying alongside under the quarter davits by the gangway ladder. I am not prepared to swear that we did, or did not. When we went under the stern there were some coolies and a white man hanging in the bight of a rope, and others hanging in ropes about the stern. The Captain said "put me on board the steamer before you take any more, and come back for them." We had then about eight or nine to a dozen coolies in the boat. The boat was not very deep at the time, she would have carried several more. On a previous occasion the boat could have carried more coolies, but Captain Hoskins said she was deep enough, and it would be better to shove off as we were, and return for more. We had a great many more coolies then than we had with the Captain. It was a thickish morning, but the sun turned out pretty warm through the day. It was pretty clear, but clouds passing over the sun occasionally. When Captain Hoskins and I left the life-boat on the first occasion she lay alongside the steamer for twenty minutes before she got another crew. The steamer towed us about forty or fifty fathoms a head of the ship, and then we dropped towards her with the wind and tide about two ships' lengths, sometimes a good deal further off. During the time I was on board the steamer, I saw her once pass within eight or nine fathoms of the stern. I have been at sea going on seventeen years. The steam boat could have anchored if she had liked alongside of the ship, clear of the roll of each vessel, and have saved every soul on board, because the ship had yards and lines to have swung them on board. Besides this, the boats could have gone between the two vessels easier than we did, whether she had anchored alongside or astern, if she had only anchored. Provided the masts had been ordered to be cut away, they could have been done so, and they would have formed rafts with their yards which would have served all the passengers. There were plenty of means of securing them from falling in board. There might have been many more saved, if the Captain of the steamer had stopped to pick up men floating about. This was not while engaged picking up others, but the steamer was passing on full power when he

was going to the ship. He hove the life buoy to several, but they missed the buoy and he never stopped to pick them up. After leaving the wreck to go down to the light ship, I saw no more until we passed the ship on return. We passed a long distance from the ship, and I saw no coolies floating about. When getting ready to get the long boat out, between 3 and 4 in the morning, I saw what I took to be the floating light's light at the Sandheads; it was a bright light and it was visible for about two minutes. I mentioned it to some of the men, but I can't say if they saw it. I soon lost sight of it. I can't say why the men did not go in the boat when she was so long a time alongside the steamer. One of the men who had been pulling with me said to one of the Dutchmen "for God's sake go in the boat and save some of those lives." He replied I shall not go. I never knew this at the time. I think the reason why the men did not go into the boat was because they were frightened. I can't account for it otherwise; there were four or five of them well, these men were all Dutchmen.

Deposition of JAMES EWART, *who on solemn affirmation sayeth:—*

I AM a Junior Mate Pilot in the Hooghly on the Licensed List, but I take ships of any draught if applied for. I have piloted ships of nineteen and twenty feet. I am a passed Pilot for the Mutlah. I have taken four or five ships up and down the Mutlah with and without steam. I consider the Mutlah river and channels to be sufficiently buoyed, with the exception of one additional buoy being required in the Western Channel on the eastern side of the channel between the Eastern Lower Buoy and the Spit Buoy. The outer buoys also ought to be first class buoys, four of them, and the Ring and Anchoring Buoys ought also to be first class buoys, and at least every alternate third class buoy should be a second class buoy. I think the buoys on one side should be cane buoys, and on the other spire buoys as at present. As regards the channels being safe as at present buoyed, I understood the *C. P. Kinch* was lost by the Pilot mistaking a buoy after seeing it in the dark, and not being able to tell whether it was a red buoy or a black one, and going on the wrong side; the difference of shape would have told him at once which side he was on. The *Kinch* had no business to have been navigating the channel in the dark, trusting to buoys in the absence of an inner light. In case of a ship being caught as she was, I therefore consider an inner light quite necessary. I wouldn't attempt to navigate those channels in the dark without an inner light. If there was the slightest chance of my not getting up before dark, I wouldn't enter. With an inner light about the anchoring buoy in the Eastern Channel it would be quite safe. I should add that there should be an additional smaller light at the Ring Buoy the same as in the Gasper Channel. The light at the Ring Buoy would serve also as a guide to vessels in the Western Channel bound in, the wind sometimes compelling ships to take the Western Channel. There is safe anchorage at the Anchoring Buoy, a floating light would ride there in all weathers.

It would take a ship about two hours to run up on a flood tide and with a fair wind to the Anchoring Buoy from abreast of the Bangadonee Reef Buoy, and there she could anchor in safety with the wind at South to South by East, moderate breeze, but heavy swell; she could ride safely in that locality. Supposing it blows harder, the ship must run up to the Ring Buoy before she can anchor in smooth water; having made the Ring Buoy you can run on to Halliday Island at any time by night or day. The distance between the Anchoring Buoy and the Ring Buoy is about seven or eight miles.

Supposing you are abreast of the Anchoring Buoy and see it at dusk, you can shape a course to the Ring Buoy, nothing to prevent it with a fair wind.

I have lately been anchored at the Ring Buoy.

I didn't see the lower middle ground buoy come up, although I passed near, and I have reported it to Captain Hoskins, but he says it is there. The baskets of the outer buoys also are gone, three or four of them.

A second class buoy should be seen on a fine day in a strong breeze four or five miles.

Deposition of MONOO *Coolie, who on solemn affirmation sayeth:—*

I WAS one of the coolies on board the ship which sunk. The Topasses left with the last boat about 4 P. M. The steamer went at 12 noon. The night passed, and next morning at about 8 A. M. the ship sunk; the ship went on her beam ends, all the coolies sunk. I and two others got hold of a plank and got on it and got to the jungle. All that day and night went, the next day at about 6 A. M. we got to land. We got nothing but brackish water to drink for ten or eleven days; then we saw a ship passing, we beckoned and shouted and they sent a boat for us and sent us up in another boat. We saw no one else saved; we got nothing to eat all this time, but managed to catch a little rain water when it rained.

RIVER MUTLAH.

DIRECTIONS FOR APPROACHING AND ENTERING.

The channels of the River Mutlah having been re-surveyed and buoyed, and a Light-vessel placed at the entrance of the Western Channel, the following are the directions for entering that river in supersession of those dated 8th March 1856:—

The Light-vessel is in Latitude 21° 4′ 15″ North, Longitude 88° 46′ 15″ East in 13 fathoms low water, and bears from the Hooghly Eastern Channel Light-vessel about East 32 miles; she displays during the day a red flag at the Main to indicate that she can supply a Pilot, and at night shews a plain light visible about 5 or 6 miles only, and fires a rocket every four hours, namely, at 8 P. M., midnight, and 4 A. M., but shews no blue light except in extraordinary cases. She is painted red to distinguish her from the Hooghly Light-vessel. It is intended to have a Pilot Brig on the station shortly when that vessel only will display the red flag and supply Pilots, burning a maroon at night, when necessary, to direct vessels.

Ships resorting to the Mutlah during the South-West Monsoon should adopt a similar route and conform to the directions for making the Hooghly Pilot Station, passing to the Southward of the Eastern Channel Floating Light-vessel, which should be sighted in about 14 fathoms; these soundings should be gradually decreased to 13 fathoms until the Mutlah Light-vessel is made. Care should be taken not to overrun the distance, especially at night, as a vessel would thus get to leeward and lose time in regaining the Pilot Station. The Light-vessel, it should be remembered, might be driven far from her position by heavy weather, and in that case would shew no light.

During the strength of the South-West Monsoon it would not be prudent to borrow nearer the sands than 10 fathoms in crossing from the Hooghly to the Mutlah Light-vessel, as there is generally a high sea near them.

During the North-East Monsoon Commanders confident of their reckoning may work up direct for the Light-vessel, and if the weather be cloudy and thick the sounding should be a safe and sufficient guide.

It is high water on full and change about 9 hours at the Light-vessel. The tides set round as in the channels to the Hooghly, the flood making to the West round to North, the ebb to the eastward round to South, having a velocity during the springs of 2½ to 3 miles an hour, and a rise of 9 feet.

There are two channels of entrance into the Mutlah, the Western or Ward's Channel and the Eastern or Roy-Mutlah Channel. In the former there are 4 fathoms at low water spring tides, and in the latter not less than 5 fathoms. The bottom throughout the channels is mud, the sands exceedingly hard, and the lead a safeguide towards them.

The Western Channel is bounded on the West by the Bulcherry Reef or sand, extending from the island of that name, and on the East by the Roy-Mutlah sand, part of which dries at low water. The channel is from 1½ to 5 miles wide, and is marked off by eight buoys, four red or western, three black or eastern, and a *ring* buoy, which also marks the north extreme of the *middle ground*.

The outer or Reef buoy of this channel is a 2nd class spire buoy with two baskets on it, and is painted red and marked Mutlah. It lies in 6¼ fathoms low water spring tides, about two miles South-East of the extremity of the Bulcherry Reef, and 3½ miles North 22° West from the Light-vessel. All the other Channel buoys are also spire buoys, but have one basket only; these baskets are sometimes washed off during the South-West Monsoon and in heavy weather.

From the outer red buoy marked Mutlah, which should be passed to the eastward about half a mile, the true course through this channel is North 14° West 19 miles to the lower middle ground black buoy marked L. M. G., which must be passed to the westward. From this point the course is North to Halliday's Island, about 11 miles off the southern extremity of which a shoal extends for nearly a mile. During the South-West Monsoon vessels should borrow on the western side of this Channel, attending particularly to the set and keeping the lead going.

The Eastern or Roy-Mutlah Channel is bounded by the Roy-Mutlah sand to the westward and the Bangadoonee Reef or sand to the eastward and is marked off by eight buoys, four red or western and four black or eastern.

The outer buoy is a second class spire buoy with one basket on it and is painted red. It is marked R. R. (Roy-Mutlah Reef) and lies in 5 fathoms low water on the South-Eastern verge of the Roy-Mutlah sand, bearing from the Light-vessel North 35° East about 11 miles. On the same bearing four miles beyond is the outer black buoy of this Channel marked B. R. (Bangadoonee Reef) with one basket.

The Roy-Mutlah mid Channel course is North 40°, West 13 miles to the anchoring buoy off the Roy-Mutlah patch, *dry at low water*. It is marked with an anchor (♁): then North 43°; West 7 miles to the *ring buoy* beforenamed, on the North extreme of the *middle ground*, passing the black buoy of the Dalhousie spit, marked L. D. (Lower Dalhousie) to the Westward; *care being necessary here*, as a ship would be in great danger if to the eastward of this spit. From the ring buoy the course is North 3°, West 7 miles to Halliday's Island.

In passing through the Roy-Mutlah Channel great care is necessary to avoid being set on

the Bangadoonee Reef, which is *steep to* and dangerous, as well as to the Eastward of the L. D. buoy; the *red buoys*, therefore, on the western side of this channel should, if practicable, be kept in sight.

There are three beacons at the entrance of the river, one at Dalhousie point and another on Bulcherry Island, which mark the termination of its right and left banks; a third stands on the southern extreme of Halliday's Island. The eastern beacon might be seen soon after passing the patch marked dry at low water on the Roy-Mutlah sand.

After passing Halliday's Island the course is North 3° East for 11 miles, which will place a vessel off *Beadon's Creek*; and 3 miles further, about North 29° East, she will be up to the *Cuttalee Reach*, where the river takes a sharp turn to the westward and the channel contracts. Here she should anchor if a Pilot be not in charge, and should not go beyond *Point Rogers*, up to which a Commander with Laycock's chart might, with ordinary care, conduct his ship safely without a Pilot, leaving the red buoys to the westward and the black buoys eastward of his course; attending particularly to the set of the tides, which in the seaward channels rnn across the sands on the first quarter flood and ebb, as in the Hooghly outer channels. But this should not be attempted by a stranger, except in cases of necessity, especially during the South-West Monsoon, as the beacons are then liable to be blown down, and the buoys to be driven from their positions by heavy weather.

CANNING TOWN;
MUTLAH RIVER,
The 21st July 1863.

GEO. J. NEBLETT,
Port Master.

The above directions are published for general information in supersession of the published instructions dated 8th March 1856.

FORT WILLIAM;
MASTER ATTENDANT'S OFFICE,
The 24th July 1863.

JOHN G. REDDIE,
Master Attendant.

RULES FOR THE GUIDANCE OF PILOTS ON THE RIVER MUTLAH.

Outward-bound Vessels.

1. ON receiving an order to take charge of a vessel the Pilot will proceed on board with all convenient dispatch and ascertain her state. It is his duty to see that her decks are clear, and to ascertain, as far as practicable, without causing unnecessary detention by hauling up cables and sails for inspection, that she is in a proper state for working, both as regards her masts, yards, rigging, sails, and also her anchors and cables. He is to ascertain that she has two bower anchors, and that if she has not a sheet or spare anchor fit for a bower over her side that she has one in such a position on deck that it can easily be brought into use in case of its being required. Should it be necessary to communicate with the Commanding Officer on these points, the Pilot is to do so in a respectful manner, and if his representations and enquiries do not meet with prompt and due attention, and he should still have reason to suppose the ship deficient in any of the above requisites, he will not take charge but immediately report the same to the Port Master. A vessel losing one of her three bower anchors after leaving *Canning* is not therefore to be stopped if the Commander wishes to proceed.

2. Pilots are directed to ascertain that the vessels to which they are appointed have the means of shewing two good lights during the night for the whole of the time they are likely to occupy in getting clear of Pilot's water.

3. Should any Pilot, on going on board an outward-bound ship to take charge, have reason to think that her crew is so weak or otherwise so inefficient as to be likely thereby to cause unusual detention to him in taking her to sea, he is to make his opinion known to the Commander or Commanding Officer on board decline moving the vessel, and report the circumstance to the Port Master, unless the deficiency is supplied immediately.

4. A Pilot before taking charge or an outward-bound ship is to be very particular in ascertaining her draught, and forwarding a certificate of the same to the Port Master's Office, signed by himself and the Commander or Commanding Officer of the vessel—a receipt will be granted for this cerifictae if required.

5. In the event of any difficulty being made in regard to the reception on board of any outward-bound vessel of the Post Office and Government despatches, for which receipts are to be duly signed by the Commander or Commanding Officer, the Pilot in charge is not to conduct her to sea, but wait for further instructions.

6. Should an attempt be made to put goods on board an outward-bound vessel after the port clearance has been obtained, and the Preventive Officer has left, the Pilot in charge will remonstrate against it, and if it should be still persisted in report the same and remain for orders, unless such goods are accompanied by a Custom House permit, in which case they are to be received, and the permit forwarded to the Port Master's Office.

7. In the event of a Pilot being appointed to a ship that does not leave *Canning* within two days after the date of his appointment, he is to report the same to the Port Master, together with the probable time of her departure, which is to be ascertained from her Commander, and any further delay is also to be reported. Pilots in charge of ships detained in any part of the river below *Canning* are to report and explain the cause; and every detention is in like manner to be reported.

8. A Pilot appointed to the charge of a ship within the boundary of the port, who, on going on board, shall find her at single anchor is to report the same to the Port Master, unless the Commanding Officer can shew a written permission from competent authority.

9. In case of a vessel taking in cargo at any place on her way down the river, so as perceptibly to alter the draught, the Pilot in charge is to forward a certificate of such altered draught, noting the place where the cargo was taken on board.

10. A Pilot of an outward-bound ship is not to transfer himself to one inward-bound without communicating with the Pilot Vessel unless in a case of emergency, which is to be reported to the Port Master, or unless he is certain that there is no other Pilot available.

11. Pilots are to telegraph all accidents when telegraphic communication is established along the river.

Inward-bound Vessels.

12. Pilots taking charge of vessels at sea are to be provided with copies of the following documents which they are to see carefully filled up:—

One letter addressed to the Collector of Customs.

Two ditto Post Master at Canning Town.

One ditto Port Master with a copy of the Port Regulations.

13. A Manifest is to be forwarded from all merchant ships, even although they have only ballast on board.

14. Pilots in charge of inward-bound ships are directed to receive any document tendered by the Commander as his Manifest, and append the same to the printed form.

15. The following signals must be carefully attended to:—

SIGNALS.

CUSTOM SIGNALS.

Ensign at Main to be hoisted on reaching Edoo Reach.	Vessel without a Preventive Officer (inwards or outwards.)
Ensign at the Fore.	Vessel with a Preventive Officer (outwards only).
	FOR TROOP SHIPS.
Jack at the Mizen.	To be kept flying from Halliday's Island till the Troops are landed.
	Vessel's number to be hoisted on passing all Telegraph Station.

16. Should an attempt be made to remove goods from a vessel in the river, the Pilot in charge will remonstrate against such proceeding and report the same to the Post Master, with such description of the goods as he can obtain.

17. Pilots in charge of inward-bound vessels are to point out to Commanders the necessity of keeping a good look-out for the Custom House boat, and of affording every facility to her in getting alongside, and that nothing short of risk to the safety of the vessel is to prevent her receiving a Preventive Officer on board at the proper station.

18. In order to secure the correct insertion of the ship's tonnage in the printed form and the inward certificate, the Pilot is to request a sight of the Register, and should this be denied he will make a note of the same in the form and on the face of the certificate. He must also state in the certificate (if a Foreign vessel) if she has been measured in a British port, and the tonnage according to the certificate of measurement, and if the vessel arrive in ballast, he is to insert in the inward certificate the words "In ballast."

19. Commanders are to be informed of the necessity of having good leadsmen in the chains while proceeding up or down the river.

20. A Pilot in charge of a ship at the Sandheads, the language of whose crew he does not understand, is not to proceed in with her without a leadsman, whom he can understand and rely upon, unless the immediate safety of the vessel require it.

21. No Pilot in charge of a vessel is to quit her off *Canning* before she is properly moored, without being duly relieved by some other person properly authorized to take charge. Vessels within the limits of the port are to be moored, unless permission to the contrary be obtained from the Port Master.

22. Pilots are not to steam, sail, or tow with the tide amongst Shipping within the boundaries of the port, unless the channel be very clear and open.

23. No Pilot having taken charge of a vessel is on any occasion to relinquish such charge before completing the service for which he was placed in charge of her, unless in case of sickness or other unavoidable necessity.

24. Pilots are to note all official letters given to them to be posted.

25. Pilots are to report themselves daily at the Port Master's Office when they are at *Canning*, and are to reside within the limits of the town.

26. They are on all occasion to report the number of ships they have passed outward and inward-bound.

27. Pilots are to use their utmost diligence in completing the service on which they are ordered, and should any one be improperly impeded in his duty he will report the same to the Port Master.

28. Vessels being permitted to be underweigh during the night in all parts of the river

when the buoys can be seen, to prevent as far as possible accidents occurring, the following Rules are to be observed by all vessels below *Canning*:—

First.—All vessels at anchor are to shew a light during the night at the starboard fore-yard arm.

Second.—Vessels underweigh at night shall shew a good light at the fore-royal or upper fore-mast-head, and when in tow of a steamer shall, in addition to the mast-head light, shew a good light at each fore-yard arm, the steamer shewing the usual light prescribed by the Admiralty Regulation.

Third.—Vessels underweigh without a steamer are to shew a light at the fore-top-gallant mast-head, and one at the jib-boom end.

29. No Pilot is to interfere with the pilotage charge of any other without his consent, except at the request of the Commander.

30. No Pilot, unless he is already employed, or proceeding on some particular service, is to pass a vessel in the river below Edoo Reach, which may have a signal for a Pilot flying, without going on board; and if the vessel is inward-bound he is to offer to take charge; should the vessel be outward-bound he is to endeavour to ascertain the cause of her being without a Pilot, and if he shall have reason to think that she has been regularly cleared, and that she had a Pilot when she left *Canning*, which Pilot has been obliged to quit through some legitimate cause (but not otherwise,) he is to offer to take charge and conduct her to sea, and it will be the duty of such Pilot to report the particulars of such occurrence to the Port Master by the first opportunity.

31. In the event of a ship or vessel losing an anchor or anchors, the Pilot in charge will state the same in writing to the Port Master in a separate report as soon as practicable, giving an accurate description of the place where the accident happened, and stating the description and weight of the anchor and size and description of the cable, to enable the same to be identified when recovered—the report is also to be attested by the Commander or Commanding Officer of the ship or vessel.

32. In like manner should the ship or vessel unfortunately get aground, the Pilot in charge will, on the first opportunity, forward to the Port Master a report of the accident, containing, besides the bearings of any known fixed objects in view and information usually furnished, the ship's draught of water, the time of tide, and hour of the day, when and the place, where, the ship grounded, the manœuvre that the Pilot was executing or attempting to execute at the time, the cause of the accident, the damage (if any) sustained, and the time the vessel was on shore. This report, if approved, to be attested by the Commander or Commanding Officer. Pilots in charge of steamers are to make a report of the circumstances as far as these may come within their knowledge of the grounding of any ship or vessel they may have in tow. This report, if approved of, to be signed by the Commander of the steamer.

33. Steamers meeting are to pass each other on the port side. Steamers with or without ships in tow likely to meet in a narrow passage, or when, from another vessel being in the way it may be difficult to pass, the one going against tide is to ease her steam, until the other is cleared the difficulty. Every steam vessel navigating any river or narrow channel shall keep, as far as practicable, to that side of the fairway or mid-channel of such river or channel which lies on the starboard side of such vessel, due regard being had to the tide and to the position of each vessel in such tide. Steam vessels underweigh are to be considered in the light of sailing vessels navigating with a fair wind, and are to give way to sailing vessels on a wind on either tack.

34. In order to prevent accidents from vessels crossing each other on opposite tacks, it is to be distinctly understood that the vessel on the starboard tack is to keep her wind, and that on the port tack to bear up. On such occasions at night two lights to be shewn at the weather bow and one at the lee. The same course to be pursued when a vessel is taken aback in a sudden squall during the night and other vessels near. In case of collision between ships, whether at anchor or underweigh, a full and particular report is to be made by the Pilots in charge, signed as in the case of grounding reports.

35. Every Pilot in case of sickness is to obtain a certificate from competent authority of his inability to attend to his duty, which he is to forward to the Port Master, and failing that he will be considered absent without leave and mulcted accordingly. In like manner on recovering from sickness he must furnish a certificate of his ability to resume his duties.

36. A Pilot before giving overcharge of an outward-bound ship at the Sandheads is to cause the usual certificate to be filled up and signed by the Commander as well as by himself, which certificate is to be forwarded to the Port Master. A like course is to be pursued in regard to the inward certificate on arrival at *Canning* to secure the correctness of which latter great circumspection is enjoined.

37. The firing of guns, unless as signals of distress, is forbidden in any part of the river above Cuttalee Reach.

38. If a Pilot consider himself aggrieved by any conduct on the part of the Commanding Officer of a ship, he is to transmit his complaint in writing to the Port Master.

39. Much inconvenience and serious damage being likely to occur if a passage for vessels moving up or down be not kept clear within the boundaries of the port, it is desired that a channel of 300 yards in width be kept open, and Pilots are positively forbidden to leave ships in the channel whether moored or at single anchor; but in case of their being actually obliged to bring up therein the Pilot is not to quit her until she is removed out of the channel.

40. Vessels are not to be underweigh at night without the Commander's consent, signified in writing in the following form :—

To Mr. Pilot of the ship

Sir,—I request you will keep the ship underweigh as long as in your opinion you can do so in safety, and I hereby hold this ship responsible for any damage that she may do to any other vessel lying at anchor, shewing lights according to the rules of the Port.

41. No vessel is to be underweigh in or above Cuttalee Reach at night unless the night be clear, so that the buoys and marks can be seen distinctly.

42. Pilots are forbidden from seeking or receiving directly or indirectly a gratuity from the Commanders, owners or agents of vessels that may be required to take charge of. Any discussion about a gratuity for piloting a vessel between a party concerned in her and a Pilot, whether before he takes charge, or whilst he is in charge, or after he has made over charge, is strictly prohibited, and will render him liable to dismissal.

43. Pilots are directed both on arrival at and just before leaving *Canning* to make themselves acquainted with and to attend to such rules and instructions in addition to the above as might appear from time to time in the Order Book at the Port Master's Office, and to keep copies of them for reference.

GEO. J. NEBLETT,
Port Master, Canning.

Port Master's Office;
Port Canning,
The 18th June 1863.

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Resolution by the Lieutenant-Governor of Bengal,—dated the 15th November 1865.

READ Emigration Proceedings for August 1865, Nos. 18-20.
" " " " " " 59-61.
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Letter from Secretary, Government of India, Home Department, No. 1550, dated 1st September 1865,

Letter	from	Master Attendant,	No.	2345,	dated	5th September 1865,
"	"	Protector of Emigrants,	"	626,	"	18th " "
"	to	Master Attendant,	"	1329T.,	"	22nd " "
"	"	Dr. Donaldson,	"	5586,	"	" " "
"	from	Master Attendant,	"	2596,	"	" " "
"	"	Captain H. Howe,			"	27th " "
"	to	Dr. Donaldson,	"	5702,	"	4th October "

" " Messrs. Sandes, Stack, Collis, and Mirfield, No. 5659, dated 6th October 1865,

Letter	from	" Abbott and Lattey,			dated	10th October 1865.,
"	to	" " "	No.	5737,	"	12th " "
"	from	" Stack, Collis, and Mirfield,	"	6592,	"	12th " "
"	to	" " "	"	5840,	"	16th " "
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1. The delay which has occurred in dealing with this case is owing chiefly to the absence of the Law Officers of the Government from Calcutta during the Doorga Poojah holidays, and partly to the want of a full explanation from Captain Burbank, the Protector of Emigrants, which has now been received.

2. On the 14th July last the Protector of Emigrants forwarded to the Government for orders a letter from the Commander of the *Eagle Speed*, then lying in the Mutlah, tendering for the conveyance of native emigrants to Demerara. There was some doubt as to whether, under a strict construction of the law, (Section 7, Act XIII. of 1864,) emigration could take place from the Mutlah; but as it appeared to the Lieutenant-Governor that Canning was virtually an auxiliary port of Calcutta, connected with it by a railway and under the same administration and management, and that the shorter passage to sea would be in every way advantageous to the emigrant labourers, His Honor directed the Protector to report fully on the subject, and authorised him, in the meanwhile, to allow the *Eagle Speed* to embark emigrants at Canning for Demerara if she were in all respects fit for the service. The tender of the *Eagle Speed* was accordingly accepted, and the ship, having been surveyed and reported perfectly eligible in every respect for the conveyance of emigrants, was licensed on the 5th August to convey 450 adult emigrants to Demerara.

3. Both the Protector and the Medical Inspector of emigrants reported very strongly in favor of Canning as a port of emigration, and considered that to make it the place of departure for emigrant ships would be decidedly a change for the better, provided that certain specified precautions were taken to prevent delay in the embarkation of the labourers and in their departure to sea after embarkation. Accordingly the embarkation of labourers at Canning was authorised generally, subject strictly to the conditions specified by the Protector, all extra expense being borne by the emigration offices. And the Protector was desired to report after six months on the results of the experiment in respect to the health of the emigrants and the sufficiency of the existing establishment to superintend the embarkation. It should be explained, however, that the orders authorising emigration generally from the Mutlah, though issued and dated the 7th September, were given by the Lieutenant-Governor when on tour on the 31st August, and that intelligence of the loss of the *Eagle Speed* did not reach His Honor until afterwards. It has since been intimated to the Protector that no further emigration from the Mutlah will for the present be allowed.

4. The Lieutenant-Governor has no doubt whatever that in almost all respects it is better for emigrant labourers to depart to sea by the Mutlah than by the Hooghly, and that the danger or risk of accident in the navigation of the former is less than in that of the latter. But if a vessel with emigrants on board be wrecked in the Mutlah, even by unavoidable accident, and if all possible means be taken to save the lives of the emigrants—still more if she be lost through gross carelessness, and shamefully abandoned in a sinking state with emigrants on board—it is less likely that they will be afterwards saved in a river as yet

comparatively unfrequented and unprovided with a telegraph than if they were wrecked in the Hooghly, where early notice would be given, and where more ready and abundant means of help would be at hand. For this reason it is inexpedient that there should be at present any further emigration from the Mutlah, and it has accordingly been prohibited.

5. On the 7th August the Protector forwarded, for the orders of Government, a certificate from Mr. Vardy, the Pilot who was to have charge of the *Eagle Speed*, to the effect that he considered the *Lady Elgin* to be a first class steamer for the Mutlah river, and that on account of the experience of the Captain he would much prefer that she should tow the *Eagle Speed* to sea. The Protector observed that the *Lady Elgin* was the only steamer employed on the Mutlah, and, as the Commander was well acquainted with the channels, he proposed that she should be employed in towing emigrant vessels to sea though classed only as a second rate tug steamer, until Commanders of first class tugs should qualify themselves for the service. The employment of the *Lady Elgin* as proposed and recommended was accordingly sanctioned.

6. The circumstances under which the *Eagle Speed* left Canning with emigrants on board and was wrecked in the Mutlah are stated at length in the report of the officers appointed, under Section 100, Act I. of 1859, to make a formal investigation into the loss and abandonment of the ship, and need not be here recapitulated. The statement made in the report is fully borne out by the evidence taken before these officers, and before the Marine Court assembled for the trial of the Pilot.

7. It may here be mentioned that, although the ship went aground on the 21st August and the wreck was abandoned by the *Lady Elgin* on the 22nd, the first intimation of the loss was received in Calcutta on the 23rd. Prompt measures were immediately taken by the Marine Authorities, the Protector, the Emigration Agent, and the Agents of the *Eagle Speed* to send assistance to the wreck and to save as many lives as possible. A Marine Court was assembled on the 28th August for the trial of Mr. Vardy, the Pilot in charge of the vessel. He was tried on the following charges:—

First.—That he, being in pilotage charge of the Ship *Eagle Speed*, outward-bound, did, through unskilfulness, ignorance, negligence, or inattention, suffer that vessel to ground on the Roy-Mutlah Sand near the entrance of the River Mutlah on the 21st day of August 1865, in consequence of which she became a total wreck the following day.

Second.—For not having done his utmost to save the lives of the emigrants after the vessel became a wreck, but for having unnecessarily abandoned the greater number of them to their fate.

On these two charges the Jury unanimously found him guilty, and he was sentenced to be dismissed from the service. This sentence has since been confirmed by the Lieutenant-Governor. The Court sat for five days and the evidence it took of all the persons chiefly concerned with the wreck, or likely to have a knowledge of the circumstances under which it happened, was of great value in the subsequent enquiry.

8. The Master Attendant, in submitting the record of the trial, forwarded certain recommendations of the Jury, which will be presently noticed, and reflected severely on the conduct of Captain Burbank, the Protector, and Mr. Heath, the Master in command of the *Lady Elgin*, whose Pilot's license he reported that he had suspended. The suspension of Mr. Heath's license was confirmed and Captain Burbank was called upon for an explanation, which he has since furnished.

9. The Lieutenant-Governor was absent from Calcutta when the wreck happened. Immediately on hearing of it he directed an enquiry under the local Merchant Seamen's Act with a view to further proceedings. The Government Solicitor had in the meantime been desired to advise the Government whether there were sufficient grounds for proceeding, either criminally or before the Admiralty Court, against the Captain, officers, or crew of the *Eagle Speed*, and to institute such proceedings if thought expedient; but on the appointment of a Commission of Enquiry the Government Solicitor deemed it advisable to wait until the report of the Commission should be received.

10. The officers charged with the enquiry under the Merchant Seamen's Act (Mr. Bainbridge, the Magistrate of the 24-Pergunnahs, and Captain Howe, the Deputy Master Attendant,) after a thorough and careful investigation made their report on the 27th September. The report and proceedings were then sent to the Government Solicitor for the Advocate-General's opinion as to the course to be taken, but it was not until the 19th October that Counsel's opinion on the subject could be obtained. In the meanwhile Captain Brinsden, the Commander of the *Eagle Speed*, had intimated his intention of leaving Calcutta, and as the Commission of Enquiry was of opinion that, though he had grossly erred in judgment, he was not liable to a criminal prosecution, no steps were taken to detain him.

11. The Lieutenant-Governor having attentively considered the proceedings both of the Marine Court and of the Commission of Enquiry, will now record his opinion on the several points raised in connection with this lamentable occurrence.

12. The Committee of Enquiry are of opinion that upon the evidence there is not the smallest doubt of the seaworthiness of the *Eagle Speed* or of the soundness and efficiency of her boats. In this the Lieutenant-Governor entirely agrees. There appears indeed no reason whatever to doubt that she was thoroughly examined and surveyed, and that, as reported by the Surveyor, she was in every way adapted for the conveyance of emigrants. No blame can therefore rest on Captain Dando, the Surveyor for Lloyds' Agency, or on Captain Boon, the Government Surveyor, who certified as to her fitness for the conveyance of emigrants.

13 Captain Burbank, the Protector of Emigrants, is condemned by the Master Attendant, Captain Reddie, *first*, for allowing the *Eagle Speed* to proceed on the voyage when he knew from her Commander that a part of the crew was intoxicated; *second*, for not going down the river in the *Eagle Speed* this being the first time coolies were shipped from the Mutlah; and *third*, for allowing the *Lady Elgin* to tow the *Eagle Speed* and for making to the Government a frivolous, if not untrue, excuse for her employment. The Committee also are of opinion that it was Captain Burbank's duty to see that the Commander of the *Eagle Speed* duly complied with the rule obliging him to muster the crew in the presence of the Pilot, and that he ought to have assured himself of their physical as well as numerical efficiency. On all these points Captain Burbank has submitted a full, but not altogether a satisfactory, explanation. Although there is no express rule requiring the Protector to examine and inspect the officers and crew of an emigrant vessel, it is his duty to see that all rules are complied with. It is therefore to be regretted that he did not see that the officers and crew were duly mustered by the Commander in the presence of the Pilot, and that he did not properly assure himself that they were in all respects efficient. At the same time it must be admitted that the responsibility for seeing that the officers and crew of a vessel are efficient rests primarily with the Pilot, and that, whatever may have been the physical condition of the crew when the vessel left her moorings, neither the loss of the ship nor the subsequent mismanagement and abandonment of the wreck is in any way to be attributed to that cause. According to Dr. O'Sullivan there was nothing the matter with any of them which a few days at sea would not remedy, and with the exception of one or two who required trifling medical treatment, the whole crew was sound, though most of them were recovering from the effects of too much liquor. It is possible that if the Commander and Chief Officer had been in strong health they might have conducted themselves otherwise than they did after the vessel struck, and have done more to save the lives of the emigrants; but the evidence does not satisfy the Lieutenant Governor that the physical condition of the officers, even if it had been more carefully enquired into by Captain Burbank, was such that, in the absence of an express rule, he would have been justified in detaining the ship if the Pilot made no objection on that account. A rule will now be proposed for the sanction of the Government of India making it incumbent on the Protector and the Emigration Agents to assure themselves that the officers and crew of every emigrant vessel are numerically sufficient and sound in health before allowing the emigrants to embark.

The Lieutenant-Governor considers that Captain Burbank exercised a sound judgment in quitting the *Eagle Speed* after she had left her moorings and in not proceeding in her down the river as he at first intended. His Honor attributes no blame to Captain Burbank for recommending, on the certificate of Mr. Vardy, the employment of the *Lady Elgin* to tow the *Eagle Speed* to sea. And in every other respect it is shewn that Captain Burbank and the officers of his department did their duty thoroughly.

14 Of Mr. Marriott, the Emigration Agent, it is considered by the Committee that he was bound to approve the Master, officers, and crew of the *Eagle Speed*; that he failed in his duty in not seeing that the Commander mustered the officers and crew in the Pilot's presence; that the life buoys provided, though more than sufficient in number, were of bad quality; and that there ought to have been five topases instead of four. He is also blamed by the Master Attendant for not going down the river with the emigrants. On the last point only has Mr. Marriott had an opportunity of offering an explanation, and the Lieutenant-Governor considers it to be satisfactory It was not necessary that either the Protector or the Agent should accompany the emigrants to sea. In regard to the inspection of the officers and crew, it is to be regretted that Mr. Marriott did not see that they were mustered in the presence of the Pilot, but his responsibility in this respect is not different from that of the Protector. He will be called upon to explain why the life buoys provided were not properly covered, and the Protector will be desired to take especial care that the life buoys are always thoroughly serviceable and that the full number of topases are invariably appointed.

15. In regard to Captain Brindsden, the Commander of the *Eagle Speed*, the Committee are of opinion that although the ship's crew was numerically sufficient, yet their physical condition at starting was such as to imperil the emigrants in the event of an emergency like that which actually happened. The Captain himself had just recovered from illness and was not strong; the Chief Officer was incapacitated from sickness; the Medical Officer was suffering from an attack of pleurisy and the effects of a broken rib; and a large proportion of the crew were only just recovering from the effects of intoxication. Yet Captain Brinsden did not muster his officers and crew in the presence of the Pilot as he was bound to do, and he allowed the Pilot to take the vessel to sea knowing that, in respect to the health and condition

of the officers and crew, she was not efficient. For this he is clearly to blame. When the hawser parted, although Captain Brinsden proposed to the Pilot to anchor, he does not appear to have urged his proposal or to have repeated it till the ship struck the sand, and though while the ship was drifting on to the sand, there was no leadsman in the chains and the lead was not kept going; he neither had soundings taken, nor pointed out the necessity for it to the Pilot. When, on the morning of the 22nd, the Commander of the *Lady Elgin* refused to anchor his steamer under the stern of the ship, and it was resolved to take to the boats, Captain Brinsden displayed the most utter want of coolness and judgment. Instead of assuming the command, directing others, and enforcing order and discipline on those who were bound to obey him, he worked with his own hands, left every one to shift for himself, and the officers and crew to do as they pleased, and then took measures for his own personal safety, leaving the ship when it was certain that she would not sink for many hours and making no protest whatever against her being abandoned. In the opinion of Counsel Captain Brinsden might have been prosecuted in the Admiralty Court under Section 79, Act I. of 1859, though it is suggested that proceedings under Section 81 (superseded by Act XV. of 1863) with a view to cancel his certificate would have been more suitable. But as Captain Brinsden has received his certificate from the Board of Trade, not from the Local Government, the provisions of the last-mentioned Act are inapplicable to his case. The only course that can be taken is to report his conduct to the Board of Trade, with the Lieutenant-Governor's strong recommendation that his certificate be cancelled.

16. Of Mr Vardy there is little to be said. He has been dismissed from the service of the Government and will never again be employed as a Pilot. He has no certificate of competency as Master or Mate, and it is not likely that he will be able to obtain one. The finding of the Marine Court condemns him as guilty, not only of unskilfulness and negligence in losing the ship, but of inhumanity in leaving the unfortunate emigrants to their fate. He is shewn to have neglected his duty of seeing that the officers and crew were mustered before the ship sailed, and a further responsibility rests upon him for having certified the *Lady Elgin* as a first class steamer for the Mutlah and having recommended her employment to tow the *Eagle Speed*, though he must have known that in the event of bad weather she was unfit for the service. There can be no doubt that to Mr. Vardy is chiefly owing the wreck of the *Eagle Speed* and the terrible loss of life that ensued. With ordinary prudence he would not have persisted in going to sea in tow of an inefficient steamer; with ordinary skill he might have saved the ship from grounding; and with ordinary judgment and courage he could have run her into a place of safety. In all these respects he lamentably failed, and he also shares the chief blame of prematurely abandoning the ship and leaving the emigrants to their fate. It does not, however, appear that he has laid himself open to any further proceedings.

17. Mr. Hoskins, the Port Master of Canning, deserves every credit for the personal exertions he made to save life, but he also failed to display the judgment and aptitude for command which are expected in an officer of his position. As the Committee justly remark, he worked himself instead of effectively directing the efforts of others. As Port Master, seeing that no one in the ship was fit for the exercise of command under the trying circumstances in which she was placed, he ought undoubtedly to have assumed responsibility and to have required all, both in the ship and on the steamer, to obey his orders and act in concert for the safety of the emigrants. That he should have advocated the abandonment of the *Eagle Speed* and the return of the *Lady Elgin* to Port Canning when he thought the ship was sinking with numbers of unfortunate emigrants still clinging to her, is unpardonable. He is therefore suspended from his office, and the Master Attendant will be requested to report, after calling upon him for such explanation as he may have to offer, whether he ought not to be removed from the service.

18. The evidence of Mr. Heath, the Commander of the *Lady Elgin*, as truly described by the Committee of Enquiry, is marked from first to last with a most discreditable want of judgment, resource, courage, and humanity. He does not appear to hold a certificate of competency either from the Board of Trade or from the Local Government, and he is beyond the reach of the law. His Pilot's license has been taken from him, so that he can no longer command a tug steamer without having a Pilot on board. And here the Lieutenant-Governor cannot forbear expressing his surprise at the conduct of the gentlemen who were passengers on board the *Lady Elgin*. It is perhaps not to be wondered at that as landsmen they should have acquiesced in the decision of Mr. Hoskins and Mr. Heath to abandon the wreck of the *Eagle Speed*; but that on the 23rd August, just after the unfortunate emigrants had been left to perish, they should have joined in writing congratulatory letters to Messrs. Hoskins and Heath assuming the letters which were published in the *Hurkaru* Newspaper of the 28th August bearing their signature* to be real and not forged) and in praising Mr. Heath for qualities the very reverse of those he displayed throughout the previous day, is not to be accounted for on any supposition which can reflect credit on the writers. Their conduct must be left to the judgment of their countrymen.

* G. J. Egerton.
W. Adey.
George Jackson.
C. S. Carlisle.
W. M. Smith.
H. C. Maitland.

19. The next person whose conduct is to be noticed is the Chief Officer, Mr. deGrouchy who is excused on the plea of sickness. But the evidence taken before the Committee shews that he was well enough to take measures for his own personal safety, while there is not a sign of his having raised his voice against the abandonment of the wreck. He could offer a reward to the men who took the life-boat from the *Lady Elgin* to bring away the Captain from the wreck and he was able to command the boat; but though he brought the Captain away he could not wait to fill the boat with emigrants, and when he had brought the Captain on board the steamer in a state of exhaustion, he did not either return to the wreck or make a single attempt to save life, or to induce others to do so. As he holds a certificate from the Board of Trade his conduct will be reported to the Board for such notice as they may think proper to take of it.

20. The second Officer, Mr. Mathews, who also holds a certificate from the Board of Trade, is shewn to have behaved in a most disgraceful manner and to have set an example to the crew of cowardice and disobedience of orders. If he had not left the country the Lieutenant-Governor would have directed the institution of legal proceedings against him under Section 79, Act I. of 1859. As it is, he will be reported to the Board of Trade with a strong recommendation that he be deprived of his certificate.

21. Of the Medical Officer, Dr Donaldson, it is to be said that he was suffering from illness and was therefore unable to render any assistance; but in the opinion of the Committee, in which the Lieutenant-Governor entirely agrees, he was at least bound to make a formal and strenuous protest against the abandonment of the coolies, who were in an especial manner under his charge. The Lieutenant-Governor has already directed that he shall not be again employed as Medical Officer in charge of emigrants, and from this order His Honor finds no ground, in these proceedings, to recede.

22. The Boatswain, Thomas Lockart, is said by the Commander of the *Eagle Speed* to have jumped over board contrary to express orders and to have saved his own life by swimming to the steamer.

There can be no doubt that this man has rendered himself liable to punishment under Section 79 of the local Act; but as it would be necessary to charge a specific act against him, and as no such charge could be proved without the evidence of the Commander, a prosecution would, in all probability, be unsuccessful. Moreover, supposing that a conviction could be obtained, there would be no moral advantage in bringing to legal punishment a man of the boatswain's rank when his superiors, who are really far more culpable, have escaped it. His conduct and that of the seamen who so shamefully disgraced the name and character of British sailors must be left to the reprobation of their countrymen. From these last must be excepted the two able seamen, William Maynard and William Wilson, and the four topases, Thomas Mills, Moses Smith, John Allsum, and W. Smith, who alone did their duty under very difficult and trying circumstances.

23. The conduct of the several persons implicated having been considered, it remains to deal with the recommendations of a general nature presented by the Jurors on the trial of the Pilot and by the Committee.

24. It is one of the duties of a Pilot on going on board an outward vessel, whether in the Hooghly or in the Mutlah, to satisfy himself that the officers and crew are numerically sufficient, and physically capable, of performing their duty and to refuse to move the vessel until the deficiency be supplied. The Master Attendant will be desired to enforce a strict observance of this duty and to report whether any further rule is necessary for the purpose.

25. The employment of any but first class tugs to tow emigrant ships to sea is already absolutely prohibited. It was only on the representation of the Pilot, that the *Lady Elgin* was, in his opinion, a first class tug for the Mutlah and that her Commander was specially acquainted with the channels, and on the special recommendation of the Protoctor, that her employment on this duty was authorised.

26. The Master Attendant will be desired to report whether any, and what, further regulation is required to prevent tug steamers proceeding to sea either with outward-bound vessels in tow, or in search of vessels inward-bound, without a sufficient supply of coal.

27. The Master Attendant will also report on the question of placing an inner light at the mouth of the Mutlah and upon the other points connected with the navigation of that river, adverted to in paragraph 53 of the Committee's report. The papers enclosed in Captain Reddie's letter No. 2596, dated the 22nd September last, shew that many of the buoys are out of repair and the beacons blown away. This is attributed to the impossibility of thoroughly overhauling them last season owing to the press of work thrown on the department by the cyclone of October 1864; and though the River Surveyor considers that, with the exception of an additional second class buoy in the western channel, the channels of the Mutlah are well and sufficiently buoyed for navigation, it is clear that the complete examination and repair of the buoys is urgently required and must be undertaken at once.

28. The Director of Telegraphs has reported on the construction of a line of telegraph from Canning to the southernmost point of Halliday Island, and the Government of India

has been requested to sanction its construction so that the work may be commenced early this season.

29. On the whole it appears that though occasion has been properly taken from the wreck of the *Eagle Speed*, and the lamentable loss of life that has occurred, to bring to notice all that, on enquiry, appears faulty in the arrangements either in the dispatch of emigrants, or for the safety of vessels navigating the Mutlah, with a view to the application of immediate and effective remedies, yet nothing can be more certain than that the calamity which has happened is in no way to be attributed to any such defects, and that but for the imprudence and unskilfulness of the Pilot, the want of judgment and presence of mind on the part of the Commander of the *Eagle Speed*, and the shameful misconduct of the Master of the *Lady Elgin*, the ship would in the first place not have been put in a position of danger, having been so placed she might easily have been extricated, while, when once it became apparent that she was a wreck, every person on board might certainly have been saved. The *Lady Elgin* may have been, and no doubt was, unfit to tow the *Eagle Speed* to sea against wind and tide in such weather as threatened when she left Halliday Island, but no one knew better than the Pilot himself the capabilities of the steamer for whose fitness he had vouched, and it was clearly his duty, in the first instance, to have detained the ship at Halliday Island till the weather improved, and afterwards when the hawser parted either to have anchored on the spot or to have returned to his former anchorage. He was at no time uncertain of his position, and if there had been an upper light in the river, or if the condition of all the buoys had been perfect, the result would have been the same. It is not to the absence of a light or to any imperfection of the buoyage that the loss of the ship can be traced. A muster of the officers and crew at Canning might have led to objections being made to some of them on account of their physical condition; but it is proved that they were numerically sufficient and that the loss of the ship is in no way owing to their physical condition, while it seems equally certain that, even if all had been in a state of perfect health and strength, as indeed nearly all of them were, the want of judgment, decision, and self-possession in the Commander, and the absence of discipline and ordinary courage among the majority of the officers and crew, would have led to the confusion on board the *Eagle Speed*, the abandonment of the ship, and the sacrifice of helpless lives just as they actually occurred. Above all, the shameful misconduct of the Master of the *Lady Elgin* in neglecting, or rather refusing to anchor his steamer astern of the ship, and in afterwards, for utterly insufficient reasons, prematurely abandoning the wreck, must be regarded as the real cause of all the lamentable loss of life that occurred. A telegraph might have brought earlier help to the few who may have left the wreck on spars and other floating objects before and after she was abandoned; but to the mass of those who were left on the wreck when the steamer abandoned it, her departure was the immediate and certain cause of destruction. This flagrant act of moral delinquency is aggravated by the fact that the steamer, after going in the direction of the floating light to ascertain her position, passed the wreck on her way back at a distance of five miles without going near her to see if any further assistance could be rendered to the perishing emigrants of whom hundreds were still left on board. It is to be hoped that compunction was felt at least by some on board the *Lady Elgin* when on the following morning she overtook the ship's boat in which the topases had succeeded in saving thirty-four lives besides their own after the wreck had been abandoned.

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SUPPLEMENT TO

The Calcutta Gazette.

WEDNESDAY, DECEMBER 6, 1865.

OFFICIAL PAPERS.

A SUPPLEMENT *to the* GAZETTE *will henceforward be published, containing such Official Papers and Information as the Government of Bengal may deem to be of interest to the Public, and such as may usefully be made known.*

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Report on the Cattle Disease of 1864.

From DR. C. PALMER, Presidency Surgeon, to S. C. BAYLEY, ESQ., Junior Secretary to the Government of Bengal,—(dated the 7th October 1865.)

I HAVE the honor to forward my Report on the Cattle Disease which appeared in this neighbourhood in 1864.

I regret very much the great delay in submitting this: practically, however, this delay has been of advantage, and has added much to the interest of the subject. I am convinced that the disease now raging in England is the same we had here in 1864. I am persuaded it is a disease which for years has existed extensively in India, but which has up to this time not been recognised, and I am hopeful that it is amenable to treatment. Occasional or sporadic cases of a mild character are frequently met with and are successfully treated.

Report on the Calcutta Epizootic, or Cattle Disease of 1864.

THE year 1864 will be memorable in the annals of Bengal as that in which the first Agricultural Exhibition was held in India. The collection of animals of various kinds was such as the most sanguine promoters of this great and successful undertaking scarcely ventured to anticipate. The accommodation laid out in the spacious grounds of Belvedere was, however, ample. There was no crowding of the varied, numerous, and interesting gathering of cattle, horses, goats, &c., all of which were kept distinct and separate, were well housed and cared for, and the space allotted was all that was required, either individually or collectively. It was not long, however, after the opening of the exhibition on the 24th January that one of the cows exhibited, was taken ill, and died. Several exhibitors took alarm and early removed their cattle; a rumour fast gained ground that a "murrain" had broken out. This fear was soon confirmed by the fact that other cattle became ill and died, and it was considered so serious, that the subject was brought officially to the notice of Government, and the Government was requested to take the matter into consideration and cause an investigation to be instituted and reported upon. The Agricultural and Horticultural Society of Bengal, through the representations of Mr. John Stalkartt, took an active part in the enquiry and suggested to His Honor the Lieutenant-Governor the appointment of a medical officer to assist, or rather to conduct, the wished for enquiry. In compliance with that request the writer of this paper was directed to carry out the views of the society and furnish a report on the nature and history of this "murrain," and, if possible, to suggest a probable method of successful treatment of cattle attacked by it, and the means to be adopted to check its progress.

When, however, the orders of Government to this effect were received, (and there was no delay whatever in issuing this order,) the disease was on the decline, not, however, before it had committed extensive ravages in the dairies and farm-yards in the suburbs of Calcutta.

We purpose, for the sake of clearness, to speak of this disease as the "Calcutta epizootic of 1864," believing this term epizootic to be more correct, and to convey a more definite meaning than the term "murrain," or cattle plague. The word "epizootic" having precisely the same technical signification in veterinary medicine and pathology that "epidemic" has in human.

The earliest cases of the "Calcutta epizootic" that appeared in the neighbourhood and were brought under treatment occurred on the 2nd January, or prior to the opening of the

exhibition. There is little doubt but that the disease existed to a considerable extent for some time even antecedent to this; indeed, it is difficult to define a period for its first appearance in Calcutta. It will be shewn presently that a disease very similar, if not identical, broke out in Entally, in the suburbs of Calcutta, in 1862, and since then occasional or sporadic cases have been observed. The opinion has been entertained by many that the disease originated amongst the cattle exhibited at Belvedere; but such was, as we have just shewn, not the case. It existed for some time previous to the holding of the exhibition. There is ample proof, however, that many healthy cattle contracted the disease there, and carrying it to their homesteads infected others. Mr. Rutherford, who was the first to recognise the existence of the epizootic, was early impressed with the idea that he was dealing with a disease hitherto unrecognised in this neighbourhood, by either cattle proprietors or by his profession, and it was not long before he was made fully aware of its intractable, almost incurable, nature, and of its infectious character. As has been observed, it first attacked one, and then many of the cattle exhibited, and towards the close of the exhibition the epizootic appears to have reached its height. From this time it gradually died out, and when the subject was made one of special investigation, the disease had not only materially lessened, but the cases that were brought in were found to be less severe and more amenable to treatment. By the end of April the epizootic had disappeared as such altogether, although sporadic cases have since been brought under notice and treatment, as we are informed by Mr. Greenhill; but as an epizootic from this time, the end of April, the disease had died out. We may therefore define the time during which the disease existed as an epizootic from January to April inclusive. The havoc this epizootic committed during the period under review was great and serious; it spared but few; neither condition, nor age, nor sex, was a protection: indeed those best fed and cared for, and in the highest condition, were at least as liable to be attacked as cattle in poorer condition and indifferently housed and fed; and all equally succumbed. The disease, as a rule, made a clean sweep of all the cattle in a yard where it had found ingress. We may, in elucidation, mention the fatal result to the large and valuable herd of cattle belonging to Mr. Floyd of Alipore; he lost all. Mr. Stalkartt of Howrah lost all his, and many others who had for years given the subject of the improvement of the breed of cattle in Bengal much consideration, and had expended much time and money on this object, saw their work of years demolished in a few weeks. It is not, we regret, in our power to give any correct or reliable statistics shewing the number of cattle attacked by this epizootic; but the result of treatment of those which were brought in was most alarming and discouraging; probably not less than 90 per cent. died! (Rutherford.)

We now proceed to give the symptoms of this epizootic, for which we are indebted to Mr. R. Rutherford, who made careful notes of the cases that were brought under his observation and treatment, and who has most liberally placed his notes at our disposal. Mr. Greenhill also lent us valuable assistance whilst conducting our enquiries, and his observations corroborate those made by Mr. Rutherford. It is to be remembered that these notes were written some fifteen months since, and when we compare them with the symptoms given of the epizootic now raging in England, their closeness and similarity to these is remarkable. Mr. Rutherford describes the symptoms thus:—"The disease is ushered in, in all cases, with fever of a remittent character, but it is only in a few cases that the shivering and sweating is observed; the skin is hot and dry, or otherwise of a clammy feel; ears hot, and pulsation of their arteries very distinct; extremities hot and cold alternately; breathing accelerated and oppressed; catching of the flanks, and frequent twitchings of the muscles of the flank. Dulness and loss of spirits is an early symptom, and a strong disinclination to move or be moved about; the horns are hotter than usual, more so near their base; eye dull and expressive of pain of a dull character; conjunctival lining red, and towards the inner canthus the membrane shews several ecchymosed spots; gradually the eye becomes duller and more dusky in hue, a discharge of tears is constant, and the animal experiences great annoyance from the flies buzzing about the eyes; the muzzle is usually dry, hot and glazed, or otherwise a few drops of water are exuded, which, however, do not run into each other and make the muzzle moist but remain isolated. There is early a watery discharge from both nostrils, which gradually assumes a muco-purulent character. From the mouth you early observe a dribbling of saliva, of a sticky nature and mixed with air, and of a disagreeable fetor; the mouth is very hot and breath early of a most disagreeable fetor; this is a most important symptom and will almost distinguish the disease from any other. The tongue towards its base is slightly swollen and coated with mucus and saliva. I have observed no soreness of the mouth except in one case, and that was confined to the gum of the incisor teeth. At times, however, slight ulcerated spots are easily observed on the Schneiderian membrane; they are small and superficial, irregular edged, and of a yellow tinge, owing, apparently, to a covering of lymph on their surfaces. The colour of the Schneiderian membrane is early of a deep red hue, gradually becoming more so, and in many cases evidently embarrasses the breathing. The air expired through the nostrils is also of a fetid odour, as also is the discharge; cough, although present, is not, in my opinion, pathognomonic of the disease, as I have only noticed it two or three times; this, I think, is owing to the intense inflammation of the fauces and larynx; the pain of coughing would be fearful and the animal avoids it. Amongst the earliest symptoms is the animal's total refusal of food and drink; water even cannot be swallowed, and these forced upon the brute are swallowed with great pain and difficulty: this is a distinguishing symptom and one of great value taken in conjunction with the dribbling of fetid saliva from the mouth. At first the urine is only slightly changed in colour, in some instances not at all, but in all cases it latterly becomes very much diminished in quantity, of a high colour, and strong smell. The action of the bowels, at first natural, rapidly becomes deranged, the discharges are of a darker colour, incline to a blackish green hue, rank and very offensive odour; but as yet there is no positive diarrhœa. At any time, however, from this, diarrhœa may

supervene; the fœces become much thinner, are discharged frequently and with violence, mixed with mucus and air, and in most cases shortly afterwards with blood. By this time, however, the fever has generally altered in character; it has assumed a low typhoid form; the animal is thoroughly prostrate, capable of no exertion or exercise of nervous energy; the former symptoms are aggravated, the skin becomes cooler and more clammy, and the ears of irregular heat; remission of the fever takes place, sometimes once a day, in other cases in two days. This also is observable of the purging in a few cases; the breathing becomes short and quick, and pulse quick and tremulous; expression of face is that of dull pain and congestion about the head; the flies swarm about the eyes, mouth, and nostrils, and, as appeared in my *post-mortem* examinations, readily deposit their ova on the inner edge of eyelid and nostril. In milk cows the secretion is early diminished, gradually becoming less, but rarely entirely suspended; it is, however, of inferior quality and slightly altered in colour, as if mixed with the serum of the blood. In some cases symptom of abdominal pain occur, getting up and lying down at times, boring the head into flanks and cold sweats; in others there is strong evidence of the lungs being involved: the breathing is catching and abdominal, and auscultation gives an increased harsh sound over the region of the larger bronchiæ. Towards the lower part of the trachea and bifurcation of the tube the mucous râle is very distinct. Tympanitis of the first stomach is a common symptom, but never to a great extent, and is owing to the suspension of rumination, which latter took place at the commencement of the disease; the food in the stomach ferments and decomposes, giving off gas in the process. If tapped the gas still continues to form, unless some strong stimulants is passed in through the canula. Tenesmus is now present, and the motions are frequently mixed with blood; in other cases the discharges are like dirty water and come away with sudden violence, discharged almost involuntarily. By this time the animal has become extremely offensive, her motions and breath taint the surrounding atmosphere to a nauseating degree, and in the majority of cases death now rapidly ensues from exhaustion and depraved blood."

Such are the symptoms noticed and detailed by Mr. Rutherford; he has condensed them into the following as "diagnostic symptoms":—

1*st*.—Total refusal of drinks, also of food, and this from the earliest stage of the complaint.

2*nd*.—Disagreeable, fetid breath.

3*rd*.—The finger placed backwards on the tongue can detect the slightest fetor; generally this is unnecessary, as the saliva which dribbles from the mouth affords ample evidence of the fact.

4*th*.—No eruption on teats, or soreness of feet.

5*th*.—Diarrhœa of a fetid character early setting in.

6*th*.—Scanty,—high-colored urine.

7*th*.—Fever of a remittent form.

8*th*.—Disease averaging from two to eleven days, four days averaged in fatal cases; convalescence protracted to many weeks.

9*th*.—Inflammation of pharynx and base of tongue.

10*th*.—Tenesmus and dysentery, at times choleraic evacuations. These symptoms, thus carefully noted by Mr. Rutherford, tally with the observations made by Mr. Greenhill, v. s; and by many non-professional observers who watched the progress and symptoms of the disease with minute attention. Amongst these Mr. Floyd has written a most clear and able description of the epizootic, as it first attacked and made its way through his farm-yard. This account is so full of interest that we venture to give it *in extenso*. Mr. Floyd writes—"I sent several cows to the late exhibition at Alipore, and they were all in good health when they left my farm-yard. A day or two before the prizes were awarded I observed that my best cow was failing in milk and would not eat (all) the food that was given to her. I attributed it to her being in a strange place. The following day she appeared afraid and anxious to leave the stall, quite regardless of her calf. In the afternoon an up-country cow died in an adjoining stall, and in the neighbouring stalls several belonging to Mr. Apcar and others were reported to have refused their food. A few days prior to this one of two cows that had come from Chowringhee sickened and died. The death of the up-country cow above alluded to induced me to suppose that something serious was about to happen, and I obtained permission to remove my cows. The change, however, did my cow no good, she was still fretful, and in about a couple of days became very dull; the ears drooped, saliva ran from the mouth, and eyes became inflamed. I then sent her away from the farm and had her treated by natives; they said she had the 'matha;' whatever it was, her calf took the disease and died first. The cow being a strong animal lingered for about eight days: diarrhœa came on and she died. For a week, or longer, everything went on well, and I fancied that I had acted wisely in having sent the diseased cow out of the farm. Another valuable cow, however, fell sick, and in a few weeks every cow and calf belonging to me fell a victim to the disease.

"I tried everything that man could devise, separating the healthy from the sick, keeping them perfectly clean, fumigating their houses, not sparing lime; giving those too ill to eat gram, &c., arrowroot, suttoo, and boiled rice, recommended by natives. During the first stage I tried purgatives with some, but in none could I perceive the slightest improvement for a single day; the symptoms were the same in every case, only some cows died in five days, others in eight or ten. The coat of my cows became rough, but there were no pustules visible, the mouth and throat appeared inflamed, and the eyes became mattery after the redness subsided, which was generally in about three days.

"I would here remark that I placed three healthy cows in my stable in the hope of saving them; they did very well for some time, but even there the disease attacked them; they were removed without loss of time. A fortnight after, however, my horse got sick, suffered with the same symptoms, and died in less than eight days. I got the stall thoroughly repaired, the floor renewed, and all the wood-work painted, and all the time it remained unoccupied (nearly two months.) I kept it well aired and smoked, not apprehending infection. I brought a healthy young mare and kept her in the stall for about twenty days, when she too sickened in the same way and died. The sufferings of the horses were greater than those of the cows; the throat became affected much sooner.

"In one thatched shed, with a kutcha (mud) floor, four calves became diseased and died. I then placed an old sow in it and kept her there for about three months; she never got ill, and when I removed her I had the shed well cleaned and covered with clay and cow dung and kept two horses in it up to the day of the late cyclone, (October 5, 1864,) when the shed was blown down; the horses were not sick nor sorry for a single day." Mr. Floyd proceeds to recommend, on the authority of a letter to the Illustrated London News of some time since, turpentine, and states that the remedy was successfully tried by his neighbour, Mr. Pritchard; to this we shall revert when we notice the mode of treatment of the disease. He then observes: "The disease from its first stage attracts myriads of flies, which prove very distressing to cows. When Mr. Pritchard's cow got the turpentine and linseed oil, the total absence of flies was remarkable." Some years ago the disease prevailed in Russia, and lasted for 5 years. Some parts of Australia have been known to suffer from it. Natives of the N. W. Provinces say "that whenever it has appeared, it has remained for 4 or 5 years, breaking out between November and January, and carrying off horses and other animals, as well as cows." This highly interesting account tallies very closely with the symptoms given by Mr. Rutherford, and it is of importance to note that Mr. Floyd's description is that of a non-professional person, who described exactly what he saw without consulting a veterinary surgeon. Further, both these reports were made during last year and long before the English "cattle plague" had made its appearance.

It is worthy of remark here that the cattle treated by Messrs. Greenhill and Rutherford were invariably brought to the extensive stables over which they preside, were kept in stalls and boxes adjoining horses, yet the disease was in no instance communicated to horses, and, even with Mr. Floyd's cases before us, we cannot but record our opinion that the disease is not communicable to horses.

Our own observations, and those made by others who watched the progress of the epizootic, are completely confirmatory of the foregoing.

In 1862 Mr. Ladd, who has long been an enthusiast in cattle-breeding, had a fine young cow attacked at his farm at Entally, in the suburbs; his description of the disease his cow suffered from corresponds closely with the above specified symptoms. She was treated by a highly intelligent Veterinary Surgeon, Mr. Bretherton, who pronounced the disease to be an uncommon one, and to be essentially a "blood disease." Out of a total of 9 head of cattle 7 were attacked and died; but it does not appear that the disease spread at this time. Mr. Rutherford, however, states that he believes he has met with cases occasionally both in Calcutta and on the other side of the river at Seebpore,* but that these cases were of a sporadic character and did not spread. Mr. Ladd recognised the disease at the exhibition on its first appearance as the same his cattle had been affected with two years previously, and warned Mr. Floyd of its infectious nature and advised him to remove his cattle at once; but the warning came too late; these circumstances are of practical importance, as they go far to prove that the Calcutta epizootic of 1864 was really not, as was generally believed, a new disease, although we are not in a position to assert that it had been previously known as an epizootic.

Having thus fully given the symptoms characterising the Calcutta epizootic of 1864, we proceed to remark upon other epizootics which have been rife of late years in different portions of this country; and we shall be led to the conclusion, from the information which has been submitted by the chief officers of extensive districts, that a disease similar to, probably identical to, that we have described, has been long known under other denominations in India, and we shall endeavor to shew that at least two distinct epizootics are, and have been, of frequent occurrence. To quote extensively from the reports which have been submitted would be to lengthen this paper to an inconvenient and unnecessary extent. The correspondence has already been published in the Supplement to the *Calcutta Gazette* of March 12th, 1864. We propose, therefore, to extract only briefly from these letters, premising that there is a remarkable resemblance in all the descriptions given, so much so, that we are compelled to believe that similar epizootics have been recognised in various districts and appear to be equally fatal in all. There are, doubtless, many other and different epizootics which may have been confounded with those described; but we have, we believe, ample evidence to lead to the conclusion that at least two distinct, highly fatal, and infectious, epizootics have been described in these reports with considerable accuracy. One of these is the same as the Calcutta epizootic of 1864. The other is of a different character, but also well known in Calcutta. The districts from which reports have been submitted comprise a large portion of the Madras Presidency, and nearly all of Bengal, *viz.*, Burdwan, Nudden, Rajshahye Patna, Chittagong, Bhaugulpore, Dacca, Cuttack, Assam, Chota Nagpore, Cachar, Darjeeling, and were the enquiry extended to the N. W. Provinces and the Punjab, it is believed that reports similar to those submitted by the Bengal officers would be furnished, and Mr. Floyd's statement, founded upon information given him by natives belonging to the North-West, that a similar disease has been for years known there, would receive confirmation.

When it is borne in mind that the various reports above alluded to are each an analysis of many reports furnished by the magistrates attached to the several districts in the extensive divisions mentioned, we should, *â priori*, expect to find a great variety of description and not a little actual inaccuracy. Such, however, is not the case, and we believe that the general similarity of these reports is owing to the fact that the natives, as a rule, describe all epizootics, or cattle plagues, as small-pox,—ghootee or bussunt; and this is particularly exemplified in Mr. Floyd's memorandum. He says, speaking of his cow, that he had handed over to the natives for treatment,—"they said she had the matha," small-pox: further, we have known a disease attacking numerous heads of cattle in Calcutta, and carrying off large numbers, described as bussunt or ghootee (small-pox. Under this name it was for years known as existing amongst the cattle belonging to the municipality of this city, and it was only in 1861, when a veterinary surgeon was, on our recommendation, appointed to the care of the municipal cattle, that the disease was accurately described and recognised, not as a

* Of 13 head of cattle 13 were attacked and all died.

variola or small-pox, but as a most alarming, fatal, and highly infectious epizootic, *viz.*, the "eczema epizootica," or apthous epizootic, or "foot and mouth disease" of veterinary pathologists. It is this epizootic which has been so universally described and in terms of extraordinary similarity as the disease which has reckoned its victims by tens-of-thousands throughout India, and with which the epizootic which appeared in Calcutta and elsewhere has been, we believe, not unfrequently mixed up and confounded: the two diseases have many features in common, but they are entirely different in their nature. The "eczema epizootic,"—the animal is hot, listless, exhibits all the symptoms of fever, and is *lame:* the feet high up in the cleft of the hoof are early affected; vesicles are frequently observed on various parts of the body, especially between the thighs; the mouth becomes affected, dysentery supervenes, and if allowed to arrive at this advanced stage, the majority die; but the disease if early recognised is very amenable to treatment. From our own experience we believe it selects the ill-fed, overworked, and weakened constitution. Comparing these symptoms with those given of the Calcutta epizootic of 1864, it cannot be a matter of surprise that the two diseases have been confounded.

Captain Nelson describes the cattle disease in the Madras Presidency thus:—"The disease in question, which is now reducing the herds by half, shews itself first in a refusal of food; the ears droop; the eyes run water; purging commences, which in a few days becomes a bloody-flux, and the whole body is covered with pustules: the animal dies between the fifth and tenth days, when with a piece of cloth you may sweep the body completely free of hair and cuticle; it comes off as if it had been scalded." This description tallies completely in certain well-marked features with the symptoms given of the Calcutta epizootic, but it clearly and indisputably, we consider, establishes the difference, in that the animal is "covered with pustules," &c. Captain Nelson is describing the "epizootic eczema," or, as it is commonly called in England, the "foot and mouth disease," and we venture, without casting the least disparagement on Captain Nelson's observations, to hint that, had the epizootic he has so well described been watched by a veterinary surgeon, we should have learnt, in addition, that the feet were early affected, even though actual lameness had not resulted.

Captain Campbell, Deputy Commissioner of Nowgong, describes an epizootic in his district thus:—"On referring to the records of this office I find that in the year 1853, from January to June, no less than 21,625 head of cattle died. During the above period cholera was raging to a great extent and carried off 9,060 persons, consequently the natives I asked about it say it was the same disease that carried off the cattle. The symptoms appear to have been a *swelling of the tongue*, which protruded from the mouth, great purging, and the animal was generally dead in two days. I cannot discover that there was any resemblance to small-pox, as appears to be the case at Madras." Here we are evidently dealing with a disease distinct from that described by Captain Nelson, and we are of opinion that it was of the nature of the Calcutta epizootic.

From Jessore, a district which suffers much yearly from extensive mortality of cattle, we have Mr. Oliphant writing as follows:—"It (the cattle disease) is known by the name 'Mardrishtee, which means the look of mother 'Shitala,' the goddess of small-pox, and the first symptoms which generally shew themselves are a disinclination to eat food, a bloody colouring of the urine, and the breaking out of pustules on the body and these are followed by others mentioned by Captain Nelson." Mr. Oliphant proceeds to say that the disease is considered fatal, and mentions the means used for effecting a cure or arresting its progress. This disease is, we feel persuaded, "the eczema epizootica." Mr. Oliphant, however, goes on with his investigation, and says—"There is, however, another disease in this part of the country very similar to the above, but much more common, called 'puschima,' probably because it was supposed to have travelled from the west, and a large number of cattle have fallen victims to this disease within the last few years. The symptoms are, for the most part, the same as in the first-mentioned disease, with the exception *that no pustules are visible on the body. The natives, however, appear to think that the two diseases are distinct*, and that what cholera is to man, puschima is to the cattle; they look upon it as fatal and do not appear to try any remedy or cure." Mr. Oliphant states that owing, as he is informed, to the ravages of this latter epizootic chiefly, the diminution of cattle in his district—Jessore—is such that the price has risen "ten times higher than it was formerly." In the district of Burdwan again two distinct diseases are described. The one as ghootee or small-pox, the other is there also called "puschima," which is more fatal than the former. The immediate symptoms are, "loss of appetite, swelling of the glands of the throat, difficulty in breathing, enlargement of the head, and occasionally of the stomach also." It is scarcely possible to have a more independent convincing evidence than the above that the two distinct epizootics we have named have been for years raging in one and the same district or locality, and it we consider establishes our view that the two epizootics, *viz.*, the eczema and the Calcutta epizootic, have extensively existed, and not improbably, contemporaneously in the same localities, and that they have been in some instances confounded. The reports before us are replete with similar evidence; but we must be content with one further extract to add still greater force to this opinion. Mr. Jervoise Grey, writing from Sarun, describes a disease which is there called "seetla" or "matha" or "chenchuck," and of which the symptoms are similar to those of the cattle murrain prevailing in the Madras Presidency, namely, refusal of food, running from the mouth, eyes, and nostrils, and purging, *but pustules are said to appear only slightly and occasionally*. This, we are of opinion, is the Calcutta disease, and not the "eczema epizootica." Mr. Holm, a gentleman of great experience in Rungpore, alludes to a disease amongst cattle known there as "gola-har," the chief symptom of which is "ulcerated sore throat," for which no successful treatment is known. He also describes the bussunt or small-pox and "cholera."

Sufficient has, we think, been advanced to prove the existence, very extensively throughout India, of two distinct and very fatal epizootics; the one, we believe, to be identical with the "eczema epizootica," or "apthous epizootic," or "foot and mouth disease" of England. The other is

identical with the Calcutta epizootic of 1864, and which we have advanced evidence to shew was no new disease but had hitherto been either confounded with other diseases, or not taken any very special notice of. We have hitherto spoken of this epizootic as that of Calcutta of 1864, without attempting to classify it amongst recognised cattle diseases. We have little doubt, however, that this disease is the one known in Europe as the "Rinderpest," the epizootic which for so many years past has devastated Central Europe, and from "its home" the steppes of Russia has again found a footing in England and is at this moment working out its deadly course amongst the cattle of the metropolis, and by the last received accounts is spreading through the counties of England,—a disease which in the opinion of those best qualified to judge, both in England and France, was restricted to a circle, large indeed, but still restricted, and could not possibly extend itself beyond those precincts. If our opinion be correct, it will be seen that this deadly cattle scourge has been making rapid strides in this, an eastward direction, and that all the regulations which have been on the Continent of Europe so rigidly enforced, the military 'cordons' which were to have prevented any diseased cattle from leaving a farm or a locality in which the disease had shewn itself, and the strict supervision exercised at ports, both of export and import, have apparently proved futile in checking the spread of this fatal epizootic in a westwardly direction. Accepting the opinion expressed by Professor Symonds and other leading veterinary authorities, both in England and on the Continent, that the steppes of Russia are the home of this disease, and that it has spread from thence by infection, and that by severe sanitary prohibitions its progress might be limited; it is a highly interesting and important fact to advance that this same disease has travelled eastward, and as it has been unchecked by any sanitary restrictions, its progress has been, perhaps, proportionally more rapid in an eastwardly and unguarded and unprotected direction than it has been westwardly, where science, backed by arbitrary and even despotic Government aid, has been called in to check its march, but with, as it now appears, only partial success; it was checked only, not turned back; it is raging in England with a violence equal to any it has exhibited in India or elsewhere, and threatens to bring distress and disease to thousands. It, however, must be borne in mind that, although a universally admitted contagious or infectious disease, it is not at present believed to owe its existence to infection alone, it is held to be a true epizootic engendered by some malarious, or, as yet unknown, epizootic influence, and in all probability its cause will be found to be similar to all other epizootics, and it will exhaust itself or die out. It would occupy too much space to transcribe the symptoms, &c., given by Professor Symonds and others of the Epizootic of Central Europe and Russia, and which is known on the Continent as the Rinderpest, which name Professor Symonds proposes to designate it by in England. We content ourselves by asserting that those symptoms so closely resemble the symptoms observed here of the disease in 1864 that little doubt can be entertained as to the identity of the two diseases; but should any person wish to pursue this subject more minutely we would refer him to Professor Symonds' evidence given before a Parliamentary "Committee on contagious diseases bill" and his "report on the cattle plague:" and a paper by M. Renault, Director of Alford, read before the Central Society of Agriculture of France, all of which are contained in the "Veterinarian" for 1857-58 and 1859; and in an article headed "cattle plague" in the Veterinarian, July 1st, 1857, will be found a very full description of the Rinderpest, which we had transcribed, but now exclude from this paper, as we fear extending it to too great length. These articles are well worthy the perusal of those interested in this enquiry, and we believe that the symptoms described in the "Veterinarian" proves the identity of the two diseases, the "Rinderpest" and the Calcutta epizootic of 1864.

It has been remarked in England by Professors Symonds, Gamgee, and others that the present English epizootic is not only the "Rinderpest," but that it was known in England in 1745, and was ruinously destructive throughout the country. Existing for several years (12) in spite of the most stringent sanitary laws enacted and rigidly enforced with the view of checking its spread, it was stated to have been then imported from Holland by two diseased calves; it is now reported to have been brought by foreign cattle into Islington market. The general opinion is, that it is an imported and infectious disease, but on the other hand there are many who insist upon its originating within the country, and is not an imported disease, and this question is now being very warmly discussed. The descriptions given of the symptoms are, however, very similar and admit of little or no misunderstanding or doubt as to the nature of the disease when it shews itself. We select amongst numerous reported symptoms, furnished by men of eminence, the following, which are published by order of the Privy Council. The identity of the symptoms, with those recorded by Mr. Rutherford in this paper, are remarkable, and again confirm our opinion of the nature of the disease which we observed here in 1864.

The following is copied from the *Evening Mail* of August 7th, 1865:—

"Description of the symptoms of the disease before referred to.

"Variations in the earliest indications of the disease will be manifested; these depending somewhat on the severity of the attack, but more especially on the circumstance as to whether the digestive or respiratory system is the chief focus of the malady.

"As soon as the affection declares itself the animal ceases to take any kind of food, and in most cases even refuses water; rumination is suspended, and the animal stands with its head drooping and its ears drawn back. If made to move, it shews great prostration of strength, and frequently staggers as if about to fall. The skin is hot in places, and often remarkably so between the limbs, the hind ones in particular.

"An exudation early takes place from these parts, and is succeeded by cracks and sores. The hair is staring, especially along the upper part of the neck, shoulders, and back. The extremities are cold, even at the commencement of the disease, and in a latter stage the increased heat of the surface of the body gives place to a remarkable coldness, especially along the course of the spine.

"Tears trickle from the eyes, which are red and expressive of suffering, and a watery discharge flows early from the nostrils. There is a continuous increase of these secretions, which become more or less purulent in the advanced state of the malady. The mouth is hot, red, and 'inflamed,' often presenting here and there raw-looking spots, especially on the inner side of the lips and along the roof. The breath is fœtid. The respiration is increased, and generally accompanied with a moan in the advanced stages. A slight cough is also present in some instances. The pulse is quick and weak and scarcely to be felt, excepting at the heart, even at the commencement of the disease.

"The bowels are sometimes torpid at the outset, but diarrhœa leading to dysentery mostly follows, the evacuations being slimy, liquid, and of a dirty yellow colour, occasionally tinged with blood. Tenesmus is likewise present as a rule. Slight tremors of the muscles of the shoulders and thighs are to be observed in some cases, and so also is an emphysematous condition of the skin along the upper part of the back. In milch cows the secretion of milk is quickly arrested, a remarkable diminution in the quantity taking place as one of the early indications of the attack. As the disease advances towards a fatal termination the prostration of the vital powers becomes more marked; the breathing short, quick, and more painful; the alvine evacuations more fœtid and more slimy, and the surface of the body deathly cold. The animal will sometimes sink as early as twelve hours from the commencement of the attack; but in many cases the disease will be protracted to the fifth or sixth, and occasionally to the eighth or ninth day.

"The period of incubation of the disease is found to vary, the majority of animals sickening on the tenth day after exposure to the infection, but some have been attacked on the seventh day."

Nothing can be more convincing than the above description, tallying almost verbatim with those we have given of the symptoms of the Calcutta epizootic. The diseases are, we consider, one and the same. Mr. Rutherford's memorandum was written fifteen months since. Mr. Floyd's ten months since; the symptons just copied from the *Evening Mail* not two months ago, and Mr. Greenhill, who has paid much attention to the disease and has treated a vast number of cases, gives a similar description.

"It would be highly interesting to trace the roads by which this epizootic has spread itself over the old world, and doubtless ere long we shall ransack its origin and spread with the same accuracy as the origin and spread of epidemic cholera has been investigated and made known. It is worthy of remark that the cattle disease which devastated Egypt broke out in that country a few weeks after its disappearance here, and we are informed by the *Times* that that epizootic carried off no less than 1,700,000 head of cattle.—(*Evening Mail*, August 7.)

Mr. Rutherford made *post-mortem* examinations of a great number—with one or two exceptions—all of his cases, and he has kindly placed his notes at our disposal; they will be read with interest by those who are prosecuting the subject. He remarks—"The principal changes were confined to the mucous membrane of the alimentary tract. *The tongue* in all cases is swollen, particularly towards its base, and throughout its whole substance I observed effusion into and discoloration of the muscular substance. The superior investing membrane in all cases was separated from the substance of the tongue by effusion, was very much thickened and was covered with a thick viscid fetid secretion, or products of inflammation, apparently *muco-purulent*. The mucus membrane of the *pharynx* was similarly inflamed, and presented the same characters, being thickened and covered with a greyish exudation. In all cases these appearances extended into the nasal passages, producing throughout appearances somewhat modified towards the nostrils. In some cases small abrasions were observed on the Schneiderian membrane. I noted the fact of immense quantities of small bodies resembling the ova of flies covering the mucus membrane of the posterior nares and pharynx. In most cases the inflammatory signs were traceable into the larynx, and thence more or less modified into the *trachea*, seldom further. From the *pharynx* the appearances above noted were to be easily traced along the *œsophagus* into the first and second stomachs and into the third stomach; here, in many cases, the food was found caked as hard as in the disease known at home as 'Fardel bound.' This appearance is owing to the non-swallowing of fluids, the arrest of secretion and functions of the third stomach. In all cases the fourth or true stomach was very seriously affected; it was generally empty, with the exception of a little variously coloured liquid; the mucus coat red, in patches dark red, swollen and thickened and very easily detached from the muscular coat. In many cases bile was plentiful in the stomach, as also in the *duodenum*, which intestine, with the jejunum and ileum, was affected similarly as, but more intensely than, the stomach; ulcerated patches were frequently met with, but never any deep ulcers, but rather rough, irregular edged depressions on the mucus membrane, with dark red circumferences. The *large intestines* were generally empty and but slightly affected, with the exception of the *rectum*, which generally exhibited signs of great irritation. The *liver* was in all cases highly congested, and even enlarged. The kidneys and other viscera were in no wise affected. The blood was in a grumous state."

Mr. Greenhill also made *post-mortem* examinations of very numerous cases which came under his observation and treatment, and he gives the following as the chief and most important of the diseased appearances noted:—"The back part of the tongue and throat inflamed; mucus membrane of the larynx and air passages inflamed; heart soft in texture; liver congested, and the whole of the fourth stomach greatly inflamed with patches of a dark purple hue, and abrasions of the mucus membrane all along the alimentary canal. The rectum for about three feet from the anus inflamed and studded with black patches. The large intestines healthy; kidneys healthy."

These *post-mortem* appearances correspond in many respects, and indeed, generally, with those met with by Professor Symonds, and described in his evidence before the Parliamentary Committee before alluded to. They indicate a typhoid or "enteric" condition, and bear out, to a very considerable extent, the idea that has been advanced that this disease is a "Typhoid Fever."

To those who have read the reports and evidence of Professor Symonds published in the "Veter-

narian on the Rinderpest," also the reports furnished by the commissioners and magistrates throughout Bengal of the cattle diseases observed in their several districts especially noticed in this paper, our own remarks regarding the Calcutta epizootic of 1864, and the recent accounts of the disease now raging in England, it will not be a matter of surprise to learn our complete inability to recommend with confidence any one particular treatment as likely to be generally attended with successful results. We have already recorded the almost universal fatality amongst all the cattle submitted to treatment. At one period every case died, but towards the decline of the epizootic many cases did well. Some of these exhibited the disease in a marked form, but by great care and attention made a slow, tedious, but at length complete recovery; and from these we may be permitted to recommend a course of treatment which in mild cases will be found to be generally successful, and certainly worthy of trial in even the most hopeless. We would venture to hope also that as the nature of the disease is more minutely investigated, and its pathology understood, a corresponding advance will be made in its treatment, and this, we feel persuaded, will ere long be the result of the general discussion and deep interest the disease is at present commanding in England.

It would be of no practical utility our relating the modes of treatment which have from time to time and in different places been adopted by the natives of this country. The result of such treatments has been generally utterly inefficacious, based, as they frequently are, upon superstition. "Poojahs," with some; rice grown at Juggernauth, raw fish, and the dried tongues of tigers and leopards with others, have had, and continue to remain, on trial. More rational and consistent measures have, however, been in many instances adopted, such as the removal of infected cattle, cleanliness, fumigating infected cow-sheds, and the giving of nutritious non-stimulating food and fresh wholesome grass, also stimulating drugs; but the same story is told by all; treatment is inefficacious, and to quote any mode of treatment which is allowed to be of little value would be simply filling this paper with certainly many curiosities of native and even european treatment of diseased cattle, but can be of no practical utility

To give, however, the treatment adopted, in some cases, with success, will, we consider, be of much practical assistance, not to that portion of the public only who are deeply interested in this important subject, but also to members of the veterinary profession, both in India and in England, who have hitherto considered the disease almost, if not wholly, incurable. We might quote many cases of successful treatment, but the following will exemplify sufficiently the treatment which we would advocate. The two cases subjcined were treated by Mr. Greenhill. We watched these and we can safely affirm that they were well marked and almost hopeless cases of the disease:—

Case I., by Mr. Greenhill.—"April 10th, 1864, called to see a cow of Mr. J. Stalkartt of Howrah. The cow was in an off place, having been separated from the others by the owner. I found the cow with a young calf by her side about six weeks old; the cow's skin was hot and dry, coat staring, breathing increased, mouth and breath fetid; a quantity of saliva dropping from the mouth; the saliva was of a thick sticky character; eyes rather dull. Ordered the cow and calf to the hospital. Purging had not commenced when I first saw the cow. Gave spirit of nitric ether six ounce, aromatic spirit of ammonia two drachms. On the 11th cow worse; eyes sunk in her head, breathing increased, purging greatly, black in colour and fetid, with slime coming after the fœcal matter had passed, lying down a good deal, the head protruded straight; gave opium one drachm, camphor one drachm, with gruel; towards night the cow seemed a little better, but took not the slightest notice of her calf; repeated the medicine. On 12th purging less, cow easier, breath fetid; gave spirit nitric ether six ounce, gentian four drachms, aromatic spirit of ammonia two drachms in gruel. Calf taken the same as the mother; with great trouble we gave it food. Night, cow better; gave gentian and ginger half ounce each, with one drachm camphor in gruel: gave calf gruel: calf unless roused would lie in one place. On the 13th, cow this morning passing large quantities of blood, but the fœcal matter better in colour and the fetid smell not so great: calf worse; gave cow two bottles of beer with two drachms of gentian and two drachms of ginger. At 2 P. M. cow for first time notices calf and inclines to pick green grass: calf worse. Night, cow easier; dung of better colour, and less purging; gave gruel with beer. On the 14th, cow better; calf dead; dung brighter in colour; purging stopped, no more blood passed; dull about the eyes; gave beer with gruel: 1 P. M. gave beer gruel; 6 P. M. cow breathing hard, lung affected, cough dry; blistered sides with croton oil and turpentine; gave opium one drachm, tartar emetic two drachms. On the 15th dressed blisters, gave gruel; breathing easier, and brighter about the eyes, purging setting in again; gave camphor and gentian each two drachms, and opium one drachm in gruel: 1 P. M. gave gruel again; cow appeared easier; 6 P. M. purging less, gave gruel. On 16th cow better and brighter, purging stopped, breathing less; dressed sides, gave gruel; cow picks a little Australian hay for the first time. On 17th cow better; dung bright in colour, but still fetid; gave gruel; eats a little dry hay and green grass. The cow from this time had no bad symptoms and was discharged cured.

Case II.—A white bullock entered in April 11th. Coat staring, large discharge from mouth and nose, breathing quick and fetid, dung of a blackish colour; gave epsom salts one lb., powder of capsicum one ounce, turpentine four ounces, and gruel. On 12th bullock purged, smell fetid, dull in coat; breathing slightly decreased; flow of saliva from mouth and discharge from nose less; gave camphor one drachm, spirit nitric ether six ounces, aromatis spirit of ammonia two drachms: 1 P. M. gave gruel; bullock dull, purging lots of mucus and small quantities of blood, and very fetid: 6 P. M. purging less; bullock dull; gave ginger and gentia of each two drachms, with beer in gruel. On 13th bowels more healthy, less fetid, eyes brighter, less fever; gave camphor one drachm, nitrate of potass two ounces in beer gruel: 1 P. M. gave gruel; looking better but not feeding: 6 P. M. purging stopped; dung healthy in colour; eats nothing. On 14th bullock better; eyes brighter, breathing little harder; breath less fetid, dung rather hard, but healthy, refuses all food; gave beer gruel, lays down with head straight out and

groans a little: 1 P. M. gave tartar emetic two drachms, nitre two ounces, ginger one ounce: 6 P. M. dung healthy in colour, but hard; eats nothing; gave epsom salts two ounces, camphor two drachms, powder capsicum two drachms. On 15th bullock not so well, breathing greatly increased; blistered both sides with croton oil and turpentine; gave tartar emetic one drachm, nitre two ounces, turpentine two ounces in gruel: 1 P. M. no better, blister upsetting the animal: 6 P. M. the same; gave gruel. On 16th blisters taken, dressed; breathing easier, but grunting; bowels well opened, but not much purged; a quantity of gas passing off from intestine; gave assafœtida two drachms, powder capsicum one drachm, camphor one drachm: 1 P. M. easier; gave gruel; looking about; left off grunting: 6 P. M. gave beer gruel. On 17th dressed blisters; bullock looking better; coat smoothed, eyes brighter and fuller, breathing easier, beginning for first time to pick Australian hay. This bullock had no relapse from this time, and with nursing and good feeding completely recovered."

These two cases exemplify the mode of treatment which in Mr. Greenhill's hands has been most successful, and under which he has saved about 50 per cent. Mr. Rutherford has kindly furnished the following summary of his treatment:—"Many of the cases, in fact all that I admitted into hospital, were put into cool, airy, and thoroughly healthy boxes. My earliest cases were treated, if purging was present, with brandy and tincture of opium, (laudanum,) and on relief being given this was followed by frequent doses of quinine, brandy, and ammonia, in different forms, invariably the purging returned and as invariably sinking and death. At one gentleman's request, and on consideration of his theory of the disease, I opened the skin, made wounds and injected and inserted on sponge infusion of quassia; the result was death in the two or three cases experimented on. Different mixtures were applied to the head to keep the flies off, such as those of camphor, turpentine, creasote, and tar water. One case, that of a very fine young Devon bull, recently imported, and in which the symptoms were peculiarly violent, I had removed to a large airy box, and at once gave a mixture containing the liquor ammonia acetas and sulphate of magnesia, (epsom salts,) inserted a seton on each side of the throat and *fired* his spine, and twice a day applied a strong solution of the nitrate of silver to the base of the tongue and pharynx; he had large quantities of gruel poured down his throat, and stimulants of every description; and also Donovan's solution of arsenic was administered; this medicine was also given in several other cases, and with no satisfactory results. This animal, like all treated at this period, died. In March the disease became more amenable to treatment, as it was also becoming lessened in intensity and in numbers of animals attacked, and from this period cases did recover. One case especially is deserving of notice. A cow, the property of Mr. Cockerell, of Allipore, which had the disease in a well-marked form, and from the precautions I adopted for the protection of the other cattle in his homestead, the disease did not extend. The treatment adopted in this case, stimulating the throat both internally and externally daily; administration of large and repeated doses of camphor, sweet spirit of nitre, nitrate of potass or nitre and bhang, and a sufficient quantity of whey to form a drench, and the diet such as she would herself select. I experienced great difficulty in many cases from the total suspension of rumination, and from the affected condition of the third stomach, preventing the free and absolute passage of medicines administered into the system, I had to puncture the rumen in many instances to allow of the escape of gas generated in the decomposition of undigested food; in some cases I passed a tube into the stomach, which allowed the escape of gas as fast as it formed, and by means of which I could pour in stimulants with the view of rousing the rumen into action. I am satisfied, from the results of my latter cases, that the most effectual treatment consists in mild laxatives, combined with powerful diffusible stimulants, and particularly counter-irritation by setoning and blistering over the right side, especially towards the false ribs. Setons to the region of the throat I also recommend, and supporting the strength with the best and most nutritious diet in a liquid form. There are many things which will suggest themselves in special cases to the observer.

"In many cases I noticed great relief obtained from sponging the body frequently with vinegar and water. I think there is great difficulty in pointing out a remedy within the means of the poor class of native cattle-owners, unless they confine themselves to preventive measures and to the use of native purging medicines, combined aromatics and stimulants."

Mr. Floyd has advocated the employment of turpentine and linseed, and towards the end of the Calcutta Epizootic this treatment was most efficacious where it was tried. It is one that we believe might be more extensively and with much confidence again carried out; it is certainly well worthy of trial, being within the reach of all.

We may give the following as the general indications of treatment to be followed:—

I.—Placing the patient in a well ventilated open place, with plenty of clean straw, a dry flooring, and scrupulous cleanliness.

II.—Aperients and diffusible stimulants, such as ammonia, ether, camphor, the nitrate of potass, and sedatives, of which the *Cannabis Indica*, Indian hemp, or bhang, is perhaps the most valuable, and in this country the most readily commanded.

III.—Counter-irritants, such as turpentine and croton oil embrocations, setons smeared with some stimulants, especially croton oil, as being quick in its action, and these may be applied to the throat and sides of the chest, and especially over the right side and region of the liver.

IV.—Nutritious and even stimulating drenches, gruel made with beer, arrowroot, linseed, and even alcohol or ether, may be mixed occasionally with these drenches, and fresh green fodder or any fresh wholesome food, whenever the animal shews a disposition to pick any.

V.—Sponging the body, especially the head, nares, and around the eyes, with cooling washes, such as vinegar and water, which will give a feeling of relief and coolness, and tar water or kerosine may be employed with the view of keeping off the flies which swarm about the diseased animal.

VI.—Supporting the strength in every possible way during convalescence.

To those conversant with the treatment of cattle the above record of cases and indications for

treatment of the disease are ample; but to many who have no opportunity of consulting a professional man, or even of obtaining the remedies we have mentioned at once, a few plain directions may be of value, and the ingredients we select are to be procured in almost every bazaar in the country.

In the first stage the following may be given as an aperient drench :—

Epsom salts eight ounces, common salt eight ounces, powdered ginger, or pepper, or any aromatic stimulant one to three ounces, mixed up in conjee water, or plain water, and given as a drench. At the same time employ hot water fomentations to the throat, or stronger counter-irritants. If the premonitory symptoms are severe, turpentine six ounces, croton oil one ounce, is a sharp and effectual counter-irritant, and, if procurable, ammonia,—the strong liquid—may be added, and this rubbed in over the fauces, the chest, the right side over the liver, and along the spine.

The bowels having been acted upon, the next object is to sustain the vital powers and stamina, and sedatives, combined with direct stimulants, should be given with an unsparing hand. The following will be found useful:—Camphor one ounce, bhang four ounces, (any preparation of *Cannabis Indica*, but that met with and sold in the bazaar answers very well,) carbonate of ammonia four drachms, brandy one pint, given in a quart of water, or, when procurable, whey.

When the dysenteric symptoms supervene, we can only recommend a steady exhibition of gruel and mucilaginous drinks and stimulants; the so-called astringents, kino chalk, &c., have not been found sufficiently successful in their action to warrant our recommending them for trial.

A strong solution of nitrate of silver, a scruple to the ounce, should be applied to the swollen tongue, and as far down the fauces as practicable; if this is not obtainable, sponging the tongue and fauces with a solution of common salt will be of service.

Where expense is not an object, we would suggest a trial of large doses of quinine and ipecacuanha: the treatment has not been, so far as we are aware, tried; but the wonderful influence the latter drug exercises in the human subject in cases of dysentery with hepatic complication, and having here before us a disease which rapidly runs into a deadly dysentery, induces us to suggest a trial of this remedy: it should be resorted to on the first appearance of dysenteric purging, at the same time we would perseveringly administer stimulants, nutritious drenches, and counter-irritants.

The above comprises all we have to suggest as regards the therapeutic or remedial measures which are likely to be of service; and admitting a loss of even 90 per cent. of cattle treated, and which is certainly taking the highest possible ratio, and bearing in mind that towards the decline of the epizootic the cases which came under review were milder and more amenable to treatment, until we find Mr. Greenhill returning a ratio of at least fifty cures per 100 treated, we are justified, we consider, in urging a full trial of the remedial measures we have above given, and in encouraging all who may unfortunately be visited by this disease to patiently and perseveringly carry out the measures we have recommended, and not to be disheartened at even repeated failures. We cannot hold out prospects of great success; but we believe that many valuable cattle will be saved by attention to the rules we have laid down. We would most certainly not recommend the wholesale slaughtering of cattle which our countrymen in England appear to have so universally, and, as we think, unadvisedly, recommended on the first outbreak of the disease; but which, we are glad to find, has received a check. We cannot refrain from quoting an extract from one of the many able and practical articles which have appeared in the *London Times*; it gives encouragement and is replete with practical common sense: "What strikes us most is the facility with which farmers and veterinary surgeons abandon themselves to despair, so far as regards all hope of successful treatment, and resort to the extreme measure of prohibition and destruction. We could do this, of course, if we were the merest savages, ready to believe a demon had passed over our cattle, and glad to fall back on our yams and plantains; but we are rather better than savages, and we profess to have some power over the diseases of man and beast. It is a very humbling confession that is made by our medical authorities when they tell us to kill at once, for there is nothing else to be done. All our epidemics from cholera and small-pox down to scarlatina measles and the common influenza do much less mischief under some treatments than others."—(See *Evening Mail* of August 21st). Such opinions, backed by the knowledge that experience has proved their truth and value, incites us to be up and doing, to use our skill and observation and experience to our utmost ability to combat the dire, but by no means universally fatal disease, which is apparently extending itself over every country of the world.

We have confined our remarks thus far to the purely therapeutic and remedial measures to be enforced in cases of actual disease. There yet remains an even more important branch of the subject to be noticed, *viz.*, the prevention of the disease and the checking it when once it has shown itself in a district, village or homestead. To fully enunciate our views on this most important subject would carry us far into the recognised and admitted rules of general Hygiene, a science which of late has become generally studied, and which is working out much practical good. Without asserting that fresh air, fresh pure water, absolute cleanliness, wholesome and properly proportioned food, and a regulation of temperature will, combined, form a complete barrier against the attacks of all diseases of a malarious or epizootic nature, we are yet justified in advancing the opinion that these, which may be not incorrectly termed the foundation of hygiene, will so modify and dilute, if we may be permitted the expression, the epizootic "influence" or poison, that the disease will be of comparatively insignificant importance and danger. In proof of this we adduce the numerous instances which have already been brought to notice of dairies in London having wholly escaped the epizootic there owing to their advanced hygienic state, whilst others in their immediate vicinity have been actually swept away. Too great stress cannot therefore be laid on these points as protective against epizootic disease; but should the disease effect an inroad,

the question of how to check its further spread is one of the utmost importance. Prompt and complete separation of the healthy from the affected and suspected cattle is to be enforced. To effect this it may be a question as to whether the still healthy cattle should be removed to another and an untainted spot, or the diseased animal taken to some place especially set aside for its reception and treatment. The latter will be the more generally feasible plan, but when it is practicable to remove the unaffected cattle, we believe this proceeding the more likely to be successful in checking the disease; this may, however, involve constant change, and thus render its being fully carried out in the great majority of cases impracticable.

In the mofussil, where occasionally almost unlimited space is at command, this course should, we think, be insisted upon; early separation, however, is absolutely to be carried out, and not only of the animals themselves, but of every article they have come in contact with that can be removed, and fixtures must be at once and thoroughly disinfected. Straw, dung, hay troughs, and such like should be removed, burnt or disinfected; the stall in which the animal stood should not be again used, but thoroughly cleansed out and disinfected and it would be well were some cheap disinfectant sprinkled over the stalls containing the healthy cattle; night and morning a small quantity of McDougall's disinfecting powder might be dusted lightly over the stalls and sheds. Mr. Murray, in a letter to the *Times*, says he has long adopted this course in his stalls at Manchester with excellent result, and "the cost does not exceed one penny per week per horse." All animals dying should be buried without a moment's delay, not skinned; and no animals should be allowed to approach the burial-ground until some time has elapsed since the last interment.

Although in the epizootic of Calcutta condition appeared to be no protection, yet, as a general rule, we should expect to find the poor, ill-fed and dirty cattle more susceptible, and their physical state should be improved as far as possible.

The question of inoculation has been mooted, and by some the experiment has been strongly urged; we learn that it was tried in 100 cases on the continent and that all died.—(*See* "Veterinarian" of 1857, page 527, a Report of Central Society of Agriculture of France.)

There are accounts also of its having been tried in Africa and Australia, and with success; but, so far as we learn, not for the disease we have been treating of, but for "pleuro-pneumonia," and we believe the two epizootics have been not unfrequently confounded. Should the disease again appear, the practice of inoculation may be, and will be, here tried and the results made known. It would be most hazardous to recommend the experiment, except as an experiment, and one on which we are quite unable at present to risk an opinion.

We would suggest that wherever there are large gatherings of cattle, as at some of our large fairs and agricultural exhibitions, a veterinary surgeon should be officially appointed to inspect all cattle brought to these places and any cattle suffering from any disease should at once be removed and subsequently dealt with as the inspector, in consultation with the police authorities, might deem expedient. Should the cattle be condemned to be killed, the owner might be wholly, or in part, remunerated for his loss.

Having thus submitted our views of the nature of the Calcutta epizootic and its treatment, we may conclude this paper by a brief summary.

1*st*.—The cattle disease, which assumed an epizootic character in Calcutta in 1864, was not the result of the herding together of cattle at the exhibition, nor did it break out there, it existed in a grave form prior to the exhibition.

2*nd*.—The disease is of a highly infectious and contagious nature, but we have no grounds for concluding that it was imported into the neighbourhood; it had existed in a sporadic form for years before it assumed a true epizootic character.

3*rd*.—The symptoms, progress, and great fatality, all lead to the conclusion that it is the same disease as that known as the "rinderpest," which always exists in certain parts of Russia, and is the same epizootic as that at present raging in England.

4*th*.—That it is confined to the bovine race and is not communicable to other animals, nor to man. (Mr. Floyd's account, however, would rather negative this, as he believes two horses caught the disease and died of it.)

5*th*.—That although no specific has been discovered, yet that judicious and careful treatment promises success. Such treatment consists in mild purgatives, combined with aromatic stimulants, and diffusible stimulants, as ether, nutritious and stimulating drenches, such as beer drenches, counter-irritants, free circulation of air, and scrupulous cleanliness.

6*th*.—That careful hygienic measures are of the greatest importance, such as wholesome food, pure water, fresh air; removal from jungles, and other sources of malaria, and in case of an invasion of the disease, complete and absolute separation of the healthy from the diseased and suspected cattle, the immediate destruction of every article or substance that can hold the infectious properties of the disease, and careful cleanliness of the premises occupied by cattle, and disinfectants scattered on the floors, &c.

We would lastly draw attention that, although the disease we have been treating of is one of the most fatal, it appears to be one the least generally recognised, amongst the several epizootics in India, to which diseases the term ghootee or bussunt, or some other name signifying small-pox is given, yet that no true variola or small-pox really appears in any of the descriptions. The very fatal epizootic in which vesicular eruptions are observed is probably the eczema epizootica. Pleuro-pneumonia is doubtless common, and the disease which we have treated of is the "rinderpest."

In India we were accustomed to the terms "cattle plague" and "cattle disease," when our attention was drawn to the subject in 1864, and our fears that the epizootic would become more formidable than it did were aroused. We hear much now of "cattle plague" and "cattle disease" in England; no distinguishing name has been given it; it is not even classified so far as we know, and we have therefore, in the want of a better term, designated the disease we have treated of as the "Calcutta epizootic of 1864."

C. PALMER, M. D.,
Presidency Surgeon.

Agricultural Show to be held at Chootea near Ranchee in February 1866.

From Lieutenant-Colonel E. T. Dalton, Commissioner of Chota Nagpore, to S. C. Bayley, Esq., Officiating Secretary to the Government of Bengal,—(No. 1931, dated the 25th October 1865.)

Sir,

In continuation of previous correspondence, I do myself the honor to submit the annexed notification and prize list relating to the Chota Nagpore Agricultural Show to be held at Chootea, near Ranchee, in connection with the usual Annual Fair in February next, and solicit that, if approved, they may be published in the *Calcutta Government Gazette*.

NOTIFICATION.

The usual Annual Chota Nagpore Fair will be held at Chootea, near Ranchee, from the 1st to the 15th of February 1866.

During the last week of the Fair a show of cattle and agricultural produce will be held, and prizes amounting in the aggregate to about Rupees 3,000 will be awarded for the best specimens of live-stock, implements, and produce named in the subjoined list.

Intending exhibitors should intimate to the Managing Committee their intentions to compete for prizes in the separate classes. This intimation should be given on or before the first day of the Fair.

E. T. Dalton, *Lieut.-Col.*,
Commissioner of Chota Nagpore
and President of Divisional Committee.

Chota Nagpore,
The 24th October 1865.

PRIZE LIST.

Live-stock.	1st Prize.	2nd Prize.	3rd Prize.	4th Prize.	Total.
DEPARTMENT I.					
Class I.					
Cattle.	Rs.	Rs.	Rs.	Rs.	Rs.
For the best Bull, aged two years or upwards, bred anywhere, suited to the requirement of the province; (large cattle not suitable)	75	50	20	...	145
For the best Bull, aged two years or upwards, bred in the division	30	20	10	...	60
For best Milch Cow, with best Calf at foot, bred anywhere	30	15	...	...	45
For ditto ditto bred in the division ...	30	20	10	...	60
For the best Bull Buffalo	50	25	...	...	75
For the best Cow Buffalo	30	20	...	...	50
For the best pair of Draft Bullocks ..	30	20	15	...	65
For the best pair of Draft Buffalo ...	30	20	15	...	65
For the best Plough Bullocks, bred in the division ...	30	20	15	...	65
Total ...	335	210	85	...	630
Class II.					
Horses, Ponies, &c.					
For the best Saddle or Draft Horse, not exceeding Rupees 500 in price, and brought for sale ...	50	25	...	...	75
For the best Stallion Poney, ditto ditto ...	50	25	...	...	75
For the best Saddle or Draft Poney exhibited, 13 hands or under	30	15	..	...	45
For the best Elephant offered for sale, Rupees 1,200 or under	100	50	..	...	150
Total ...	230	115	..	...	345

Live-stock.	1st Prize.	2nd Prize.	3rd Prize.	4th Prize.	Total.
Class III. *Sheep.*	Rs.	Rs.	Rs.	Rs.	Rs.
For the best Ram, bred out of the division ..	25	12	...	..	37
Ditto ditto within the division ..	25	12	...	...	37
Ditto pen of four Ewes, bred out of the division	30	15	...	...	45
Ditto ditto within the division ...	20	10	...	...	30
Ditto pen of five Wethers exhibited by non-residents	20	10	...	...	30
Total ...	120	59	..	..	179
Class IV. *Goats.*					
For the best Buck Goat, bred out of the division ..	15	10	..	...	25
Ditto ditto within the division ..	10	5	..	...	15
Ditto She Goat, bred out of the division ...	15	10	...	...	25
Ditto ditto within the division ...	15	10	.	...	25
Total ...	55	35	...	...	90
Class V. *Poultry and Fowls.*					
For the best pen of Fowls, 1 Cock and 3 Hens, bred in the division from imported stock ...	15	10	5	...	30
Ditto ditto imported Fowls ...	20	15	10	...	45
Ditto ditto country-bred Fowls ...	10	5	...	...	15
Ditto single Cock of any breed ...	10	..	...	..	10
Ditto pen of four Capons of any breed ...	15	8	...	...	23
Ditto ditto bred in the division ...	15	8	..	..	23
Turkey.					
For the best pair of Turkey Cock, with two Hens ...	8	4	...	...	12
Geese.					
For the best Gander, with four Geese ...	10	5	...	...	15
Ducks.					
For the best Drake, with four Ducks ...	10	5	..	...	15
Ditto ditto Guinea Fowls ...	5	3	...	...	8
For best cage of 3 pairs of Pigeons of any kind ...	10	5	...	...	15
Total ...	128	68	15	...	211
Total of Prizes in Department I, Rs. ...	868	487	100	...	1,455

Products of Agricultural Labour, &c.	1st Prize.	2nd Prize.	3rd Prize.	4th Prize.	Total.
DEPARTMENT II.	Rs.	Rs.	Rs.	Rs.	Rs.
Class I. *Country Dairy Produce.*					
Best fresh Butter, sample to weigh not less than 1 seer	5	4	..	...	9
„ Cream Cheese, weight not less than 1 seer	5	4	..	...	9
„ Cow Ghee, weight not less than 10 seers ...	20	10	5	..	35
„ Buffalo Ghee, ditto ditto 10 seers ..	30	15	8	...	53
Total ...	60	33	13	...	106

Products of Agricultural Labour, &c.	1st Prize.	2nd Prize.	3rd Prize.	4th Prize.	Total.
Class II. *Grain.*	Rs.	Rs.	Rs.	Rs.	Rs.
Being the produce of the exhibitor's own lands, to be exhibited in samples of not less than 10 seers.					
Best Wheat ...	10	5	...	...	15
,, Barley ...	10	5	...	...	15
,, Oats ...	10	5	...	...	15
,, Table Rice ...	20	10	5	...	35
,, Common ..	15	7	3	...	25
,, Indian Corn ..	10	5	...	...	15
,, Bujrah ...	5	2	...	...	7
,, Millets, best collections ...	5	2	...	...	7
Total ...	85	41	8	...	134
Class III. *Pulses.*					
Being the produce as before.					
Best Gram	10	5	...	...	15
,, Peas	10	5	...	...	15
,, Ooreed	10	5	...	...	15
,, Collection of Dâls, five or more sorts, in samples of not less than 2 seers of each kind ...	10	5	...	...	15
Total ...	40	20	...	..	60
Class IV. *Tubers.*					
Being the produce as before, to be exhibited in quantities of 1 maund.					
Best Potatoes	15	8	4	...	27
,, Sweet Potatoes	10	5	...	..	15
,, Turmeric	5	...	...	...	5
,, Ginger	5	..	...	...	5
,, Arrowroot	15	8	4	...	27
,, Potatoes, imported	15	8	...	...	23
Total ...	65	29	8	...	102
Class V. *Fibres.*					
Being the produce as before, to be exhibited in quantities of 5 seers each.					
Best Jute	10	5	...	...	15
,, Flax	10	5	...	...	15
,, Sunn	10	5	..	...	15
,, Aloe Fibre	10	5	...	...	15
Total ..	40	20	...	...	60
Class VI. *Cotton Wool.*					
Being the produce of the exhibitor's own lands, in samples of not less than 10 seers each.					
Best Cotton grown in the division from foreign seed ..	50	25	12	...	87
Ditto country Cotton	30	15	8	...	53
Total ..	80	40	20	...	140
Class VII. *Dyes.*					
In samples of 5 seers each.					
Best Safflower, being the produce of any district ...	10	5	...	...	15
,, Indigo ditto ditto ditto ...	20	10	...	...	30
,, Lac-dye, ditto ditto ditto ...	20	10	..	...	30
Total ...	50	25	...	...	75

Products of Agricultural Labour, &c.	1st Prize.	2nd Prize.	3rd Prize.	4th Prize.	Total.
Class VIII. *Oil-seeds.*	Rs.	Rs.	Rs.	Rs.	Rs.
Being the produce of the exhibitor's own lands, in samples not less than 5 seers.					
Best Linseed	8	4	...	...	12
,, Mustard Seed	8	4	...	...	12
,, Til Seed	8	4	...	...	12
,, Castor Seed	8	4	..	...	12
,, Poppy Seed	8	4	...	...	12
,, Sirgoojah	15	8	...	..	23
,, Kurrunj	8	4	...	...	12
Total ...	63	32	...	...	95
Class IX. *Tobacco.*					
Being the produce of the exhibitor's own lands, samples in 5 seers.					
Best Tobacco in Leaf	10	5	...	...	15
Class X. *Tea and Coffee.*					
Grown in the Division, samples in seers.*					
For best Tea	50	25	...	..	75
Ditto Coffee	30	15	...	...	45
Total ...	80	40	...	...	120
Class XI.					
Domestic Cocoons, not less than 100 Cocoons ...	20	10	...	...	30
Tussur Cocoons, ditto ditto ...	30	15	..	...	45
Best reeled Tussur Silk, not less than 5 seers ...	20	10	...	...	30
,, reeled Silk	20	10	...	...	30
Total ...	90	45	...	...	135
Class XII. *Sugar-cane and Raw Sugar.*					
For best 20 Canes, ordinary, country ...	10	5	...	...	15
,, ,, Goor, 10 seers ...	10	5	...	...	15
Total ...	20	10	...	...	30
Class XIII. *Honey and Wax.*					
Honey in the Comb, being the produce of domestic bees	10	5	...	...	15
Wax, unbleached, ditto ditto, not less than 2 seers	10	5	...	...	15
Total ...	20	10	...	...	30
Class XIV. *Jungle Produce.*					
Catechu, not less than 2 seers	20	10	...	...	30
Dhoona, Rosin	10	5	...	...	15
Total ..	30	15	...	...	45

* Tea, 10 seers; Coffee, 20 seers.

Products of Agricultural Labour, &c.	1st Prize.	2nd Prize.	3rd Prize.	4th Prize.	
Class XV.	Rs.	Rs.	Rs.	Rs.	Rs.
Agricultural Implements.					
For the best light Plough, suited to one Horse or pair of Bullocks	30	...	...	...	30
For the best improved native or country Plough, suited to pair of Bullocks or Buffaloes ...	15	..	...	...	15
For the best collection of not less than 6 Axes	10	...	...	...	10
,, ,, 6 Kodalies ...	10	..	..	...	10
Best Hackery ,, ditto	10	...	...	..	10
,, native-made Cotton Gin	10	...	...	...	10
,, country-made Sickles, not less than 6 ..	10	...	...	..	10
,, Rice-cleaning Machine	10	...	...	...	10
,, Machine for raising water for irrigating purposes	30	20	...	...	50
,, country-made Churn	10	...	...	...	10
Total ...	145	20	...	...	165
Class XVI.					
Garden Produce.					
Best collection of Vegetables	20	15	10		45
,, ,, of ,, exhibited by any ryot, being *bona-fide* the produce of his own land ..	15	10	5	...	30
Best collection of Fruits	20	15	10	..	45
,, ,, of Flowers	10	5	...	...	15
Total ...	65	45	25	...	135
Total Prizes in Department II., Rs. ...	943	430	74	...	1,447
DEPARTMENT III.					
Class I.					
Minerals.					
Raw Iron, smelted in the division, not less than 3 seers	15	10	5	...	30
Totals					
Of Prizes in Department I, Rs. ...	868	487	100	...	1,455
,, ,, II, ,, ..	943	430	74	...	1,447
,, ,, III, ,, ...	15	10	5	...	30
Grand Total of Prizes in all Departments, Rs. ...	1,826	927	179	...	2,932

Separate List of Prizes to be awarded from the Fair Fund.

Products of Agricultural Labour.	1st Prize.	2nd Prize.	3rd Prize.	4th Prize.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.
Best sample of Shel Lac, not less than 5 seers ...	20	10	...	...	30
„ „ „ Stick Lac, 5 seers ...	20	10	...	...	30
Wild Cocoons, Silk, best specimen, of not less than 100 Cocoons	10	...	...	...	10
Best specimen of Sirgoojah Oil, not less than 3 seers...	10	5	...	...	15
„ „ of Kurrunj „ 3 „ ...	5	...	...	..	5
„ „ of Koosoom „ 3 „ ...	5	...	...	...	5
„ „ of Sirsoo „ 3 „ ...	10	5	...	...	15
„ „ of Til „ 3 „ ...	10	5	..	...	15
„ „ of Castor Oil „ 3 „ ..	5	...	...	...	5
„ sample of Cotton Cloth adapted for native wear, made in the division, not less than 18 yards ...	15	7	...	...	22
„ ditto imported ditto ...	15	7	...	...	22
„ Tussur ditto, one Than	15	7	..	...	22
„ Woollen Blankets, from wool produced in the division	10	5	...	...	15
„ Woolen ditto, from other districts of India ...	10	5	...	...	15
„ specimen of Boots and Shoes made in the division	10	5	...	...	15
„ exhibited	10	5	..	...	15
„ Harness made in the division ...	10	5	...	..	15
„ exhibited	10	...	...	...	10
„ specimen of embroidered Fabrics and Brocades ...	30	15	...	...	45
„ collection of native-made Metal Cooking Vessels	15	10	5	...	30
Total, Rs. ...	245	106	5	...	356

N. B.—The Committee reserved to themselves the right of withholding prizes if the best specimens offered are not deemed really good of their kind.

Other prizes may be awarded from the Fair Fund at the discretion of the Committee.

E. T. Dalton, *Lieut.-Col.*,
Commissioner of Chota Nagpore
and President of the Divisional Committee.

Chota Nagpore,
The 24th October 1865.

Printed by Thomas Jones, at the Bengal Secretariat Office.

o. 45.] [769]

SUPPLEMENT TO

The Calcutta Gazette.

WEDNESDAY, DECEMBER 20, 1865.

OFFICIAL PAPERS.

A SUPPLEMENT *to the* GAZETTE *will henceforward be published, containing such Official Papers and Information as Government of Bengal may deem to be of interest to the Public, and such as may usefully be made known.*

Non-Subscribers to the GAZETTE *may receive the* SUPPLEMENT *separately on a payment of six Rupees per annum if ered in Calcutta, or twelve Rupees if sent by Post.*

No Official Orders or Notifications, the publication of which in the GAZETTE *is required by Law, or which it has been mary to publish in the* GAZETTE, *will be included in the* SUPPLEMENT. *For such Orders and Notifications the body of* GAZETTE *must be looked to as heretofore.*

port on the State of the Salt Market uring the Second Quarter of 1865-66.

T. BRUCE LANE, ESQ., Junior Secretary to the ard of Revenue, Lower Provinces, to the Secretary the Government of Bengal,—(No 1134, dated the th November 1865.)

AM directed by the board of Revenue to submit e following report on the state of the salt rket during the second quarter of 1865-66.

2. The quantity of Government salt, irrespective of the auction sales in July last, sold under rowannahs issued by the Board, amounted to maunds 12,775, as shewn in the margin, ring a monthly average of maunds 4,258, or out maunds 16,362 less than the monthly rage of the corresponding quarter of 1864-65, maunds 14,319 less than that of the last rter. This falling off in the sales at fixed tes can only be attributed to the auction sales July, the clearances of which during the arter amounted to maunds 2,36,425.

igust	1865, Mds....	5,730
ptember	,, ,, ...	2,870
ctober	,, ,, ...	4,175
	Total, Mds...	12,775

3. The sales of Government salt at the umlook depôt amounted to maunds 1,325, against aunds 8,455 in the first quarter of 1865-66, and nauds 46,800 in the corresponding quarter of 864-65. At Hidgellee the sales amounted to aunds 10,600, against maunds 15,290 in the receding quarter, and maunds 13,960 in the rresponding quarter of 1864-65. There were o sales from the Ghoosery Golahs during the uarter under review.

4. The sales of Excise salt during the quarter aggregated maunds 3,994, against maunds 2,055 in the previous quarter, and maunds 8,625 in the second quarter of 1864-65.

5. The quantities of salt which have been despatched into the interior of the country *viâ* the border chowkey of Ballikhal up the Hooghly, and by the East Indian Railway from the Howrah station, are shewn in the following comparative statement:—

Period.	Quantity *viâ* Ballikhal.	Quantity by the East Indian Railway.
	Maunds.	Maunds.
Second quarter of 1863-64	1,206,548	79,777
Ditto 1864-65	1,172,018	116,272
Ditto 1865-66	1,005,214	119,053

The quantity of salt dispatched by the East Indian Railway during the first quarter of 1865-66 amounted to maunds 175,296, against maunds 143,821 and maunds 146,294 in the corresponding quarter of the two previous years. This information was not available when the last report was submitted.

6. The importations and clearances of sea-ir salt during the quarter are shew comparatively in the following statement:—

Description of Salt.	Second Quarter of 1863-64.		Second Quarter of 1864-65.		Second Quarter of 1865-66.	
	Imported.	Cleared.	Imported.	Cleared.	Imported.	Cleared
	Maunds.	Maunds.	Maunds.	Maunds.	Maunds.	M
Liverpool Pungah ..	1,325,804	1,237,056	1,625,385	1,516,076	123,507	1,118,6
Foreign Kurkutch ..	551,978	302,955	415,843	172,260	249,842	160,30
Ceylon „ ..	.....	10,550	.....	.....	69,366	28,07
Indian „ ..	379,233	234,123	334,656	284,255	614,506	243,08
Total ..	2,257,015	1,784,684	2,375,884	1,972,591	1,057,221	1,549,794

The figures given in the last column, which represent the total quantities for which rowannahs were issued by the Board during the quarter, include a portion of the clearances from the Custom House in the previous quarter, in respect of which rowannahs had not been taken out prior to 1st August 1865. For the purpose of comparison with the figures of the corresponding quarter of the two previous years it may be as well to state that the total clearances from the Custom House during the quarter under review amounted to maunds 1,338,480.

7. The following are the details of the importations and clearances of Indian Kurkutch given above:—

Exporting Port.	1863-64.		1864-65.		1865-66.	
	Imported.	Cleared.	Imported.	Cleared.	Imported.	Cleared.
	Maunds.	Maunds.	Maunds.	Maunds.	Maunds.	Maunds.
Bombay	200,341	177,886	236,351	132,911	137,374	121,349
Kurrachee	14,972	15,867	7,336	23,906	.....	.....
Madras	73,972	37,546	64,292	21,726	368,998	121,731
Iskapalli	.....	.....	.....	.....	81,890	.....
...e	.....	.....	26,677	88,012	35,388	.....
...ng	39,472	2,824	.....	.....	40,856	.....
...ada ..	42,316	.....	.....	17,700	50,000	.....
Pondicherry	8,160	.....	.....	.....	.....	.....
Total ...	379,233	234,123	334,656	284,255	614,506	243,080

The points calling for attention in this statement are the increase in the importation from the Madras Coasts over that from Bombay, which hitherto supplied the largest quantity, and the increase in the total importations as compared with those of the corresponding quarter of the two previous years. The latter may be attributed to the high prices that prevailed in this markt in July and August last. It is also worthy of note that a large quantity of salt was imported during the quarter from Iskapalli, a port for a long time neglected. The last importation (maunds 6,480) took place in June 1861.

8. The shipments at Liverpool as [illegible] from published market reports and private [illegible] to have been in—

		Tons.
July	1865	11,432
August	„	16,288
September	„	21,974
	Total ...	49,694

The price of Liverpool Salt sold from the [illegible], which remained steady during the first fortnight of August at Rupees 84, fell about the middle of that month to Rupees 80. It rose again early in September, and continued to rise until it reached Rupees 94 about the first week of October. This rate prevailed throughout that month, the stock in port having been greatly reduced. The price of Liverpool salt in bond at the close of October was from Rupees 75 to 80.

10. Madras and Bombay Kurkutch, which were selling at Rupees 52 and Rupees 60, respectively, at the close of July, fell gradually to Rupees 42 and Rupees 47 about the end of September. Throughout October the prices of these salts stood at Rupees 45 and Rupees 50. Judda kurkutch ranged throughout the quarter between Rupees 85 and Rupees 90.

11. In September last Messrs. Halliday, Bullock and Co., (now Bullock Brothers and Co.,) of Chittagong, offered to purchase the whole of the Madras kurkutch (maunds 138,715) stored at that depôt at Rupees 46 per hundred maunds, but their proposed arrangements for the payment of the value of the salt and the Government duty thereon did not appear to the Board to be suitable, or in any way worthy of consideration. This salt will probably rise in value as the pungah stock diminishes in quantity.

12. The total quantity of salt that was available on private trade at the several Madras depôts on the first day of each of the three months of the quarter under review and of the corresponding quarter of the two previous years is exhibited below :—

Date.	1863-64.	1864-65.	1865-66.
	Mauhds.	Maunds.	Maunds.
1st August 1865	1,012,086	597,584	227,884
1st September „	666,978	601,984	180,800
1st October „	608,689	611,863	770,030

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